HELSINKI SCHOOL OF ECONOMICS (HSE)
Department of Accounting and Finance

STOCK RETURN EXPECTATIONS OF FINNISH INVESTMENT ADVISORS:

The Effect of Advisor and Stock Characteristics

Finance
Master´s thesis
Heidi Laukkanen
Fall 2006

Approved by the Council of the Department 28/11 2006 and awarded

~~the grade~~ _____

Tarkastajat: _____

KTT, Vesa Puttonen ja KTT, Sami Torstila

Helsinki School of Economics
Master's Thesis
Heidi Laukkanen

Abstract
November 21, 2006

STOCK RETURN EXPECTATIONS OF FINNISH INVESTMENT ADVISORS: THE EFFECT OF ADVISOR AND STOCK CHARACTERISTICS

PURPOSE OF THE STUDY

The objective of this Thesis is to examine the effect of investment advisor and stock characteristics on the advisors' stock market return forecasts. An empirical study was carried out to find out which characteristics if any could explain one's return expectations and perceived ability to forecast. In addition, an experiment, which examines whether framing manipulation affects ones' views on the relations between firm characteristics and stock returns, was performed.

First, the effect of several advisor characteristics on expected returns is studied. Second, the existence of false-consensus effect in the return expectations is determined by comparing the real professional consensus and the perceived professional consensus on expected returns. Third, the effect of psychological manipulation on expected stock returns is tested in an experiment. The experiment on the relation between firm characteristics and stock return is carried out to study the effect of manipulation in the forecasts. Framing manipulation is used in order to test whether different framing of a question affects an advisor's views on the relations of firm characteristics and stock returns. Respondents are divided into groups of which each respond to differently framed questions. Finally, regression analyses and statistical tests measure the significance of the results.

DATA

The data in this study is obtained from a web-based survey, which was carried out in May 2006. The study covers Finnish investment advisors who have passed the FASD General Securities Examination. The empirical evidence is based on a large-sample survey with a total of 742 advisors participating in the survey.

RESULTS

The main finding of this study is that investment advisors are affected by several factors when making return forecasts. I find that certain characteristics of an advisor explain one's market return expectations statistically significantly. In particular, the gender of an advisor explains return expectations and the perceived ability to make return forecasts highly significantly. I also find that investment advisors on average perceive to be more optimistic on the future market returns than they really are. Moreover, framing manipulation has a significant effect on advisors' views on the relations between firm characteristics and stock returns. Overall, the results suggest that a client asking for advice might get varying advice depending on how and to whom one poses the question.

KEYWORDS

Return forecast, investment advisor, false-consensus effect, framing effect

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

1. INTRODUCTION

Agents in the financial markets have received increasing attention in the academic research, as during the past few years it has been acknowledged that agents are an important link between the market and the investors. The growing interest is no surprise given that investors need professional advice in order to construct a well-diversified and efficient portfolio in the financial markets, which offer ever-expanding and more complex investment opportunities. One important group of agents in the financial markets are the investment advisors whose role is to give recommendations on investment decisions for their clients. Hence, their expertise is a key to many investors' success in asset management. Nevertheless, there is no idea on what kind of recommendations Finnish investment advisors give to their clients nor is there descriptive data on who the advisors are. In fact, whoever can give investment advice and charge from it in Finland as no licence or education is currently required by regulators[1]. This means that there are a wide variety of advisors out there of which most are without a doubt sincere professionals in their work. Yet, it is questionable whether all of them provide true expertise as some might foster overoptimistic expectations in their clients on investment advisors' abilities to forecast the market movements. Based on a large body of evidence it is however highly unlikely that any investment advisor, investor, fund manager or analyst could continuously give recommendations on investment opportunities that would lead to outperforming the market. Though being important in investment decisions, having all the market information and using deliberate market timing in transactions do not guarantee better performance. One can only know ex post, which stocks would have been the 'best-buys' and what would have been the best market timing strategy. Therefore, all that an investment advisor can offer is expertise on the investment products and recommendations on investment strategy.

1.1. Motivation for the study

This study provides an overview on the recommendations the investment advisors give to their clients on expected equity returns. The investment advisors' estimates on future expected market returns are inquired in both European markets and the emerging markets.

[1] However, changes in the legislation will take place in 2007 and a licence will be required from all investment advisors in the European Union. For more details, see Appendix 1.

Also, this study examines the views of investment advisors on the relations between certain firm characteristics and expected stock return. The focus of the study is in recognising those advisor and firm characteristics that affect one's return expectations. Given that the expected market return and the factors affecting the forecast are issues on which investment advisors give most of their recommendations on to clients, it is interesting to find out whether the views on future returns vary among the investment advisors. The study is carried out among investment advisors who can be classified as 'professionals' as all the participants have passed a General Securities Examination organised by the Finnish Association of Securities Dealers (FASD).

A large body of empirical evidence shows that subjects are affected by psychological biases in decision-making in several fields, including finance. In order to find out whether Finnish investment advisors' advice is subject to some of the biases, the psychology behind the decision-making will be considered in this paper as well. The study on expected returns will be two-folds. First the respondents are asked to give their own estimate on the expected market returns for different time horizons. These estimates will form the professional consensus on the expected market return. After that, the investment advisors are asked to give their estimate on the professional consensus. That is, they are asked to forecast what the real professional consensus among Finnish investment advisors is. By comparing the two, the real professional consensus and the perceived professional consensus, it can be determined whether the professionals on average suffer from false-consensus effect and anchoring effect. Finally, the effect of advisor characteristics on the return expectations is analysed.

The relation between certain firm characteristics to realized stock returns (e.g. Banz, 1981, Fama and French, 1992) and to expected stock returns (e.g. Shefrin and Statman, 1995, Brav, Lehavy and Michaely, 2005) has been a popular subject of recent academic research. The findings have been somewhat consistent in that certain characteristics can be regarded as risk factors but some differences have been revealed as well. Opposing evidence has been found especially in studies on expected returns, as investors do not always seem to behave in accordance with the financial theory and empirical evidence on the risk-return relation. In this study the views of Finnish investment advisors on the relation between firm characteristics and expected return is examined by taking into account the behavioural aspects of decision-

making. In a risk-return related experiment, this study uses psychological manipulation in order to reveal whether the investment advisors' views are affected by the framing effect.

1.2. Research questions

The fact that there is no data on the investment advisors or on the recommendations they give raises several interesting questions with regards to the profession itself and the kind of advice the investment advisors give to their clients. Evidently return expectations and the recommendations on the optimal investment strategy are likely to vary among investment advisors. But to find out who gives the advice, to what extent the investment recommendations differ and why do they differ, a questionnaire on the preceding issues is sent to nearly 1500 investment advisors in Finland. The empirical study will answer the following research questions:

1. What estimates for the expected market return do investment advisors on average give to a client and what do they base their estimates on?
2. What is the perceived professional consensus on the expected market return among the advisors and does it differ from the real professional consensus? That is, do investment advisors on average know what their colleagues' market return forecasts are or do the professionals collectively suffer from false-consensus effect?
3. Which firm characteristics if any affect investment advisors' return expectations on an individual asset?
4. Do investment advisors see the firm characteristics and their effect on expected return in a different light when the questions are differently framed?

1.3. Structure of the paper

The study is structured in the following way. Chapter 2 presents the most relevant academic work on the equity premium. The chapter provides background information on how the equity premium is derived and used and how it relates to expected market returns. Chapter 3 concentrates on presenting the firm characteristics that are found to correlate with equity returns. The empirical findings are presented on the viewpoint of both realized returns and expected returns. Chapter 4 introduces the psychological biases that affect decision-making and forecasting. The chapter concentrates on anchoring effect and framing effect but some

other relevant biases are also presented briefly. The factors that are found to expose to the biases are examined as well. Chapter 5 first sets up the empirical research by describing the methodology, data and survey design used. After that, the results of the study are presented and analysed. Chapter 6 concludes the study and summarizes the results.

2. MARKET EQUITY PREMIUM

Equity premium – the excess return that the overall stock market provides over the risk-free rate – is considered to be the single most important determinant in investment decisions. The equity premium, by definition, drives future equity returns and is the key determinant in the cost of capital. It is an important determinant to companies in deciding whether or not to take a project as the financial evaluation of the project relies on the estimation of the equity premium. The equity premium also plays an important role in asset allocation decisions in determining the optimal fraction of the assets to be invested in equity and in bonds. (E.g. Mehra, 2003) Furthermore it is a significant component in the classic and widely used CAPM in that multiplying the premium with beta of an asset and simply adding the risk-free rate determines the expected return on an individual asset.

Since the equity premium has various important functions in financial decision-making, it is no surprise that along with studies on expected market return it has been a popular topic for academic research. Studies have mainly focused on finding the most proper method for computing the equity premium or finding a consensus premium to be used in market forecasts. Also, many studies have concentrated on finding a solution to the equity premium puzzle[2] or on recognizing the variables that affect the market expectations. Even though most studies argue that long-term equity premium and average stock returns are somewhat predictable, there is no agreement on which method would generate the most reliable forecasts. Also, while some papers are continuously disputing on the prediction power of classic variables such as book-to-market, liquidity or market capitalization, others have provided empirical evidence on new predicting variables. A few papers even claim that no forecast method has real prediction ability. In fact, the lack of consensus on the 'right' method means that even if the views on the implied returns for both stock markets and bond markets

[2] The equity premium puzzle is a term from Mehra's academic work (2003, see also Mehra and Prescott, 1985), which denotes to the perception that the historical equity premium has been greater than can be rationalized.

would be similar between subjects, the equity premium could differ significantly among investors.

The following subchapters will present previous research on the equity premium. The main focus is in presenting the different models used in forecasting the premium and factors that affect the estimates within these models. These are introduced fairly comprehensively as the variety of different methods and factors will help understanding why the estimates of the equity premium vary so significantly and what implications does the premium have to market return expectations. Finally, surveys on professional consensus on the equity premium will be introduced briefly in the last subchapter.

2.1. Some considerations on measuring the equity premium

The fact that arithmetic mean exceeds geometric mean whenever there is variability in annual excess returns means that the choice of the averaging method will have an effect in forecasts. When the variability of annual premium is high, the difference between the results from the two averaging methods can become significant and hence the implications on using one averaging method over the other can be of great consequence. Thus, the importance of the averaging method used in forecasting the premium is the greater the more volatile is the market or the asset in question. According to Welch (2000) the long-term historical arithmetic mean equity premium has exceeded the geometric mean premium by 2%. Dimson, March and Staunton (2003) examined the historical equity premium in 16 countries for the period of 1900-2001 and found the choice of averaging method to be statistically significant. They find an annual difference of 2.1 percentage points (pps) in Sweden and as high as 5.4 pps in Germany in the realized equity risk premium depending on which averaging method was used in measuring the premium.

The equity premium is often given by long-term equity return less short-term bond return. The different investment horizon makes the equation unequal in that the equity premium will not only represent the risk premium but also the longer maturity of the equity investment. Abel (1999) decomposed the equity premium into two components: one representing the risk premium and the other representing the term premium. Able finds that the term premium accounts for 25% of the observed equity premium over the period of 1926-1993. This means that by using a short-term bond return instead of a long-term bond return in computing the

equity premium, the premium is considerably higher. Although this will not affect inferences in comparing the use of different models (the variations in risk-free rate are only an additive constant), it is good to keep in mind that differences in equity premium estimates may partly result from using risk-free rates that differ in maturity. This suggests that when making studies on the equity premium expectations, the two components – expected market return and interest rate – have to be well defined in order to reduce the risk of misunderstandings.

2.2. Methods to forecast the equity premium

The most widely used method for computing the expected equity premium is to use the historically realized equity returns. However, the extrapolation of the historical data as a method of computing the estimates for future is debatable for several reasons. In addition to the more general problems facing the computing methods such as the choice of averaging method and the term premium discussed above, the historical method confronts some other severe setbacks. First, enhancements in corporate governance, unprecented growth in productivity and efficiency, improved possibilities to diversify portfolios both domestically and internationally and reduced transaction costs have all contributed to upward stock prices during the past few decades (Dimson et al, 2003). This creates a nonstationarity problem in using realized return data for estimating future returns and equity premium. That is, the world today is not the same as 20 years ago let alone a century ago and hence using a historical return as a base for future expectations might not provide the best forecasts. Second, the forecast depends on the time period observed. Although the nonstationarity problem decreases with more recent (and hence shorter) time series, new problems will arise when shorter time periods are used for forecasting. Short time series of stock returns tend to be more volatile and thus the estimates of equity premium derived from the historical data are likely to vary too much to be of practical use (Goyal and Welch, 2006). For example, Dimson et al find that if the expected equity premium for 2002 were estimated by using the realized premia of the two preceding years, the forecast for the premium in most countries would have been highly negative and hence meaningless. During the technology bubble of 2000-2001, several equity markets had a large negative return and underperformed bond markets heavily. Consequently, it would have been absurd to base the estimates for the future on these two exceptional years as it is generally expected that average stock returns are positive and exceed the return on bonds in the long-term.

Another widely used method for predicting equity premium is the analysis of regressions between historical equity returns and certain company ratios or variables such as dividend growth rate, earnings-price ratio or even patterns in corporate finance. While some academics recommend smart investors to make their portfolio allocation and market-timing decisions based on certain state variables, which would predict the equity premium, other studies find contradicting results. Fama and French (2002) estimated the equity premium by using dividend and earnings growth rates to measure the expected returns. They suggest that the equity premium puzzle is really a phenomenon of the past few decades when capital gains have been larger than expected. Fama and French argue that estimates from the fundamentals yet provide better true estimates for the equity premium than the average of realized returns although not without setbacks[3]. They acknowledge that the dividend growth model (DGM) is subject to problems posed by drift in dividend policy. For example if companies will increasingly shift from paying dividends to repurchasing stocks, the DGM is likely to underestimate the equity premium as a result of lower dividend-price ratio. As is a problem with using historical returns in forecasting the future equity premium, during some years the estimates derived from predictive regressions could predict negative premium. In practice, this would mean that the investors expect stock returns to be less than the return for short-term bonds or that investors expect a negative return for bearing risk.

By posing restrictions on the return forecasts and the signs of regression coefficients Campbell and Thompson (2005) find small out-of-sample predictive power for several variables which beats the prediction based on historical average. First, they assume that there is a theoretically expected sign for each regression coefficient between a variable and the expected returns. Second, they expect that investors do not forecast returns by just using the linear regressions mechanically but that they first rule out the regression coefficients with a 'wrong sign'. The R^2 statistics are small but yet economically meaningful in that they would benefit investors in a very long term. Nonetheless, the predictive power is not significant

[3] Fama and French give a few reasons for this. First, other fundamentals seem to favour the dividend and earnings growth models. For example, over the period 1951-2000 average realized returns exceeded the IRR on corporate investments, which evidently shows that the realized returns were above the expected during the period. The opposite would only imply that firms were making negative NPV investments intentionally, which seems implausible. Second, the Sharpe ratio for the equity premium from the two models remains fairly constant throughout the 129-year period, which suggests a roughly similar risk aversion for both sub-periods. On the contrary, Sharpe ratio for the equity premium from average realized stock return is two times larger for the period 1951-2000 than for 1872-1950; such an increase in risk aversion does not seem plausible.

when the time period is extended. Goyal and Welch (2006) contradict with the views of Campbell and Thompson. They claim that the use of different methods and time periods in different studies is the reason for opposing results. Any variable may indicate a high level of correlation with the expected equity premium when the time period observed includes an especially good time period in terms of its predicting power. For example, solely following the dividend/price -ratio would only have paid off well during the Oil Shock in 1973-1975, a period which explains most of the variable's prediction power in the past. Same kind of an 'observation-period-dependent' explanation can also be found in many other variables that have been shown in earlier studies to have prediction power. Each variable seems to have their seasons of pits and peaks in terms of predicting power. Hence, by choosing a particular observation period, a variable may look like a useful tool for predicting the equity premium. Goyal and Welch demonstrate how even the smallest variations in observation period choices can make the difference on the statistical significance of the result.

While there is no consensus on how market premium should be measured or which standard premium to be used, the implications on financial economics decisions persist to be fundamental. The decisions on CAPM budgeting, asset allocation and so on rely on the estimated equity premium and as different forecasting methods may compute varying estimates for the premium, the consequences of choosing one method over the other can be crucial. A company may end up undertaking or rejecting a project depending on the computing method used. Or an investment advisor may give recommendations on asset allocation that are significantly different to the recommendations of his colleagues.

2.3. Empirical findings

Welch (2000) discusses the range of equity premium estimates that are suggested in the literature and used in the decision-making. He finds that the range of premia suggested is considerable. While theoretical arguments have predicted a premium of only 1-3%, historical premium and investors' estimates suggest substantially higher estimates. Over the period of 1926-1998 the popular Ibbotson Associates return figure suggests a premium of 9.4% while Shiller finds the premium to be 8.0% over the same period. Individual investors' premium estimates have even seen double-digit numbers during the bull markets (see Welch for all references on premium estimates). Welch also carried out a survey of his own on equity premium among financial economists to provide 'a common practice estimate' for the

premium. The short-term premium forecasts were found to be lower and more volatile than long-term premium forecasts. 20% of the respondents offered a monotonically increasing expected premium term structure in horizon, 50% expected a decreasing term structure and 30% were expecting the equity premium to stay flat for the next 30 years. The professional consensus for equity premium hovers around 7% both for short-term and long-term horizons, short-term premia being somewhat lower. Yet, the range of premium estimates is fairly wide when the pessimistic and optimistic averages are taken into account. Moreover, the results are affected by behavioural biases, which will be further examined in Chapter 4 in relation to Welch's survey.

It is widely accepted that markets follow a random walk in the short-term and hence short-term market movements should not affect the equity premium nor market return expectations. However, Welch (2000) finds that short-term market movements affect financial professionals' expectations. The question on whether or not a one-day market movement affects one's forecast on equity premium gives an idea on how the professionals react to market movements in practice. The average answer was –0.367 (in scale of –1 to 1, where 0 means that market movement has no effect on the estimate), which suggests that bull market lowers the aggregate estimated equity premium. Yet, this negative feedback rule should only be seen in long time periods. Moreover, by comparing the results in Welch's updates of the original study[4] it can be observed that the respondents had lowered their estimates during the *bear market*. Although most of the respondents in 1998 had indicated to follow the negative feedback rule, they really ended up doing the opposite. The mean estimated equity premium was lower in 2001 than three years before even though the market had been going *down* during the three-year period. However, the changing consensus may also indicate other factors than positive feedback rule such as new approaches to estimating the expected premium (Dimson et al, 2003).

[4] Welch I., 2000, Views of Financial Economists on the Equity Premium and Other Issues, Journal of Business, Vol. 73, p.501-537 and Welch I., 2001, The Equity Premium Consensus Forecast Revisited, Cowles Foundation Discussion Paper No. 1325.

3. FIRM CHARACTERISTICS AND THE EXPECTED RETURN

The CAPM[5] describes the relationship between risk and expected return by using beta to denote the regression of a security's return on the market return. The CAPM assumes that there is a positive linear relationship between an asset's expected return and its market beta. That is, the higher the beta of an asset, the more it is expected to generate return. The model assumes markets to be efficient which means that, among other things, investors are rational and no mispricing of stocks can occur in the market. Thus, in efficient capital markets all firm characteristics that can forecast future returns would only reflect risk (Fama 1970). Yet in practice, mispricing might occur due to imperfections in capital markets.

Evidence regarding the positive relationship between beta and stock returns is somewhat mixed. Several studies show that the market beta works well in single-factor models but not in multi-factor models. In the early 1980s several studies found evidence that the single-factor CAPM is inadequate in explaining the expected stock returns. They found that many other variables such as debt/equity -ratio, earnings/price -ratio and market capitalization could all in part explain expected stock returns in addition to beta. Furthermore, they recognised some anomalies to exist; for example small firms were found to generate higher risk-adjusted returns than other firms (Banz, 1981). The evidence on investors' return expectations is also mixed. Shefrin (2001) finds empirical evidence on investors' return expectations that contradicts with the positive relation of risk and return – a cornerstone principle of financial theory. His study shows that even though financial professionals in principle may state that there is a positive relation between risk and return, in practice investors make judgements that indicate a negative relation between the two. Brav et al (2005) find support for the relationship between the beta and the expected returns, which is again consistent with the CAPM.

Despite the evidence on certain anomalies such as size premium, there is no theory on why these anomalies should prevail. Hence, it is possible that they will be arbitraged away over some time period or that the anomalies found a few decades ago have already disappeared. Also, the findings in multi-factor models vary depending on the time period, return intervals and the methodology used in the study. Although event studies produce useful information on

[5] The capital asset pricing model of Sharpe (1964) and Lintner (1965).

the behaviour of stock prices, Fama (1998) finds that most anomalies that have been recognised are highly sensitive to the methodology used. Fama points out that there is roughly an even split between findings of overreaction and underreaction to market information which indicates that the expected abnormal return from these anomalies is zero. Consequently, Fama acknowledges that anomalies are simply chance results and, when all put together, are not against market efficiency either. In addition, the findings may be different as some studies use expected returns while others use realized returns as a proxy for return expectations. Schwert (2002) examined a wide range of earlier studies on different anomalies and found that the explanatory power of most of the variables in these studies had decreased in time or even reversed. One scenario is that when investors have recognized all of these variables and arbitraged the anomalies away, the CAPM would again become more accurate in predicting future returns. Another view is that when basing economic models on more realistic conceptions of investors and other agents in the market by incorporating the findings on human behaviour and decision-making into the models, the explanatory power of the asset pricing models will increase. Shefrin and Statman (1994) were the first to construct an asset-pricing model (BAPM), a model, which takes into account behavioural factors and recognises both rational traders and those who make cognitive errors. However, employing BAPM instead of CAPM in practical use has not yet turned out to be a solution for making better return forecasts.

But which firm characteristics do influence equity returns? Moreover, are the correlations between returns and firm characteristics positive or negative and does the sign differ if expected returns are used instead of realized returns? Chapter 3.1 summarizes the highly cited studies that first found evidence on explanatory power in certain variables as well as some of the more recent studies. Although most of the characteristics are not independent of one another but instead rather dependent on each other they are now analysed separately and references are made between the characteristics. Chapter 3.2 concentrates on examining which firm characteristics affect the stock return expectations of investors.

3.1. Empirical findings on returns

3.1.1. Liquidity

Empirical evidence shows that expected returns are an increasing function of illiquidity both across stocks and over time. Amihud and Mendelson (1986) used the bid-ask spread of a stock as a measure for illiquidity. They find asset returns to be an increasing and concave function of the spread but that the slope of the return-spread relation declines with larger spread. The return-spread relation holds even when firm size is added to the model as an explanatory variable. Brennan and Subrahmanyam (1995) find empirical evidence supporting the illiquidity premium. They find that after adjusting for the risk, relatively illiquid stocks should have higher required returns than more liquid stocks, which is caused by information asymmetry in the market. Pastor and Stambaugh (2001) studied the effect of market-wide liquidity to stock returns. They find that those stocks that are highly sensitive to the fluctuations in the average market liquidity earn significantly higher returns than stocks with low sensitivity even when adjusted to several variables such as firm size and momentum factors. Yet, Pastor and Stambaugh as well as Amihud (2002) find the illiquidity effect to be stronger for low capitalization firms, which suggests that the illiquidity effect is also related to the size effect of stock returns. That is, stocks of small firms have higher expected returns than larger firms, which is due to both low market capitalization and the expected illiquidity. However, Amihud finds that the unexpected increase in the illiquidity of a stock has a negative effect on contemporaneous stock return, as the stock price will decline to make the expected return go up.

3.1.2. Firm size

Following the evidence on illiquidity and its relation to firm size, it can be acknowledged that a small firm tends to be riskier than larger firm and hence have higher return expectation. According to Banz (1981), 'the size effect' confirms that the CAPM is misspecified. Banz finds evidence that small stocks have had higher returns than larger firms and what is predicted by the CAPM even when adjusted for the risk. However, he finds no difference between the risk-adjusted returns of mid-cap firms and large firms. Banz also acknowledges that the size of a firm might just act as a proxy for another factor that correlates with the market value. One theory could be that the firm size is related to the amount of information generated. As a consequence, the lack of information on most small firms would reduce

diversification and lead to higher returns for smaller firms. Fama (1998) however considers Banz's finding of size premium purely as an anomaly, which has arisen as the event sample has been chosen and the returns being measured in a way that supports the outcome. By analysing a range of event studies such as the one of Banz, Fama concludes that while no model can accurately predict future returns, the anomalies such the size effect are not against market efficiency.

Chan and Chen (1991) propose that the earnings prospects of a firm are a factor that affects the riskiness of a stock investment and hence the expected stock returns. When the market anticipates a company to have poor future prospect the stock price will drop and hence the book-to-market ratio will go up. The cost of capital for firms with poor prospects will be higher than for firms with good prospects and therefore the expected return will also be higher. They find that small firms tend to be those that have not being doing well. That is, they have lost market value due to poor performance. This suggests that small firms have higher expected returns than larger firms. Yet, Chan and Chen emphasize that small size by itself does not necessarily imply higher risk but that these firms may well have other characteristics that make them riskier such as high leverage or inefficiency. In line with the findings of Chan and Chen, Fama and French (1992) find that realized stock returns are negatively related to size and positively related to book-to-market ratio. That is, in order to compensate for higher risk in low capitalization and high book-to-market stocks, the expected rate of return is higher than the expected market return. Book-to-market ratio is then acting as a proxy for firms' financial distress risk that is not accounted in beta. Their finding is based on the rational valuation theory, which suggests that the two characteristics serve as indicators of risk through their relation with the economic prospects of a company.

3.1.3. Capital Structure

Bhandari (1988) uses debt/equity –ratio as a proxy for the risk of firm equity and finds positive relation between the expected stock returns and debt/equity –ratio when controlling for the beta and firm size. The highest coefficient was found when debt/equity –ratio was set as an explanatory variable together with beta and the firm size. Fama and French (1992) find support for Bhandari in that higher market leverage is positively related to average returns. However, they also find that higher book leverage correlates negatively with average returns. Fama and French explain the result of the opposite signs of relations with book-to-market

ratio. They state that the ratio acts as a proxy for a firm's financial distress risk that is not accounted in beta and captures the relative-distress risk but which can also be regarded as an involuntary leverage effect.

3.1.4. Analyst coverage and analyst expectations

Much academic research has concentrated on studying the future estimates and the accuracy of the forecasts of financial analysts. This is no surprise given that in a way the analysts' consensus earnings estimates act as a proxy for what the whole market is expecting from public companies. In several stock valuation models the target stock prices are based on the expected future earnings, which again are often forecasted by an analyst. Hence, by making earnings forecasts, the analysts have an important role in influencing the current stock price and the future price movements.

Empirical evidence indicates that the stocks for which analysts have given the most pessimistic future earnings estimate earn significantly higher returns than stocks with the most optimistic analyst expectations[6]. Those that are expected to perform poorly but surprise the market positively will experience an overly positive market reaction. Similarly, the stocks with overly optimistic expectations are more likely to be overvalued and disappoint the market with a falling stock price or even negative abnormal returns.

A company not followed by analysts is typically smaller and more illiquid than the companies being followed by analysts. That is, companies with low analyst coverage tend to have more firm characteristics that can be classified as riskier than companies with high analyst coverage. This would suggest higher expected returns to compensate for the higher uncertainty and limited analysis on the company. Merton (1987) examines the expected return on 'neglected' stocks, that is, stocks that are less followed by the market. His theoretical finding is based on the notion that widely followed stocks (complete-information case) can be priced by the CAPM but in the incomplete-information case the market portfolio is not mean-variance efficient and hence the pricing does not follow the CAPM. Consequently, less followed stocks should in theory generate higher returns than more followed and better-known stocks. However, some empirical studies have proven the opposite. Brennan,

[6] For several references (e.g. La Porta 1996, Ackert and Athanasakos 1997, and Ciccone 2003) see Helander (2005).

Jegadeesh and Swaminathan (1993) were the first to examine the effect of analyst following on equity returns. They do not find strong evidence suggesting outperformance of more followed stocks but they find that stocks followed by many analysts lead the prices of those that are less followed. Furthermore, they find that prices react to new information the quicker the more analysts follow the stock. In a recent study where the analyst coverage is measured by the number of EPS forecasts at any time over the period from 1990 to 2003, Helander (2005) finds results which imply that companies with high analyst coverage earn a premium over stocks that are less widely followed but otherwise similar.

3.1.5. Value vs growth stocks

La Porta, Lakonishok, Shleifer, and Vishny (1997) discuss the return differences between value and growth stocks and find evidence of market overreaction for earnings announcements in both value and growth stocks and in the direction that contradicts with the risk-based explanations for returns differentials. They agree with the BAPM of Shefrin and Statman (1994) in that unsophisticated investors often seem to go for the 'good companies' with a good record, as they perceive earnings growth in the past to indicate that the stock is a good investment. Based on the empirical evidence, La Porta et al find that the market only realizes their misevaluation of stocks on the day of earnings announcements and due to more positive earnings surprises for value stocks these stocks outperform the growth stocks, which in turn respond very negatively to the subsequent earnings announcements.

3.2. The effect of firm characteristics to investors' return expectations

Taking a different approach into the widely used CAPM, Shefrin and Statman (1994) built a behavioural asset pricing model (BAPM) where asset prices are the outcome of interaction of information traders and noise trades. While information traders are aware of and understand the theory on the relation between firm characteristics and stock returns, noise traders make systematic cognitive errors in evaluating the relationship. By distorting the mean-variance efficient frontier suggested by CAPM, noise traders create abnormal returns to some securities. Hence, in BAPM the mean-variance portfolio is *not* the market portfolio as in CAPM but it is tilted to those stock types that noise traders prefer. According to behavioural asset pricing theory the noise traders believe that 'good stocks are stocks of good and admired companies'. La Porta et al (1997) find results consistent with the behavioural theory as

investors were found to prefer companies with superior past growth rate to value stocks as they see these to be good companies *and* hence good investments.

In order to recognize the characteristics that make investors to perceive companies as either good or bad, Shefrin and Statman (1995) studied how investors form their expectations on stock returns. The study is based on Fortune magazine's annual surveys on company reputation. The results imply that respondents perceive large companies with low book-to-market ratios as good companies. Furthermore they perceive these good companies to be profitable investments and outperform the market in the long-term, which in most years contradicts with the evidence on realized returns. Continuing the work of Shefrin and Statman, Shefrin (2001) studied the relation between investors' judgements on short-term return expectations and perceived risk on a scale of 1-10 or beta. He finds empirical evidence on investors' return expectations that contradicts with the positive relation of risk and return – a cornerstone principle of financial theory. His study shows that even though financial professionals in principle may state that there is a positive relation between risk and returns, in practice investors make judgements that indicate a negative relation between the two. Investors are not explicitly asked whether the risk of an investment increases their return expectation but the cross-sectional structure of the expectations clearly shows that for example hedge fund managers expect higher returns from safer stocks. Shefrin notices that investors do associate book-to-market to correlate positively and firm size to correlate negatively with returns but yet implicitly investors expect higher returns from safer stocks. The analysis of results in the two studies both rely on the representativeness theory of Tversky and Kahneman[7], which would explain the negative association between risk and return that investors seem to form. Findings from both Shefrin and Statman (1995) and Shefrin (2001) contradict with the empirical evidence of e.g. Chan and Chen (1991) and Fama and French (1992) on realized stock returns, as the two latter ones show that smaller companies with high book-to-market ratio tend to be those that outperform the market. Based on these four studies, it seems that book-to-market is positively related to realized returns but negatively related to investors' return expectations. Similarly, firm size is negatively related to realized returns and positively related to expected returns.

[7] Behavioural heuristic representativeness by Tversky and Kahneman (1974), which involves over-reliance on stereotypes. For more psychological biases and cognitive errors, see chapter 4.

With respect to market capitalization, Brav et al (2005) find survey evidence for the size premium by using expected returns instead of realized returns. In their study, professionals expect smaller firms to generate higher returns than larger firms. That is, small capitalization is considered to be a risk factor over and above beta. However, they find no support for value stocks (=high book-to-market) having higher expected returns than growth stocks (=low book-to market). In fact, the sell-side analysts' return expectations indicate negative coefficient on book-to-market, which is again the opposite of what e.g. Fama and French (1992) found but supports the BAPM. Brav et al also find that investors expect 'winner stocks', i.e. stocks with high past returns, to have lower returns in the future than will stocks with low or negative returns. Hence, there seems to be a correlation between recent returns of an asset and investors' expectations but the correlation is the opposite to the findings resulted from using ex post returns. That is, according to Brav et al the momentum factor is negatively priced. Furthermore, their evidence shows a positive and highly significant relation between debt/equity -ratio and expected return, which suggests that leverage increases investors' expected returns. This finding is in line with Bhandari (1988) and Fama and French.

Bloomfield and Michaely (2004) carried out two controlled experiments to study whether investors associate certain firm characteristics to returns because they believe that the characteristics affect the risk of an investment or because investors believe them to reflect mispricing. First, beta was found to be the most important risk factor but not a sign of mispricing. The participants stated that beta correlates positively with returns, which is in accordance with the CAPM. Second, market-to-book was seen as the most important indicator of mispricing although no abnormal returns in the short-term was expected of the mispricing. Moreover, the respondents linked high market-to-book to higher risk which contradicts with the CAPM but supports the behavioural models which also find the ratio to act as a sign of mispricing. Third, the participants acknowledged smaller firms to be riskier than larger firms but they do not expect the returns to be any different in firms of different size. The result with regards to the firm size is puzzling as higher risk usually leads to higher return expectations but in this case higher return is not expected to compensate for the size risk.

4. PSYCHOLOGICAL FACTORS IN DECISION-MAKING

Research in psychology suggests that a number of biases are likely to affect an individual's behaviour. People tend to be optimistic on the future but also on their own ability to forecast, which indicates overconfidence. Furthermore, people tend to believe that others are more like themselves and that others' opinions and forecasts are closer to their own ones than they really are (Thaler, 2000). Also, several experiments have proven that people cluster their answers around an anchor which can either be self-provided or disclosed. In forecasting future market returns, the anchor can be for example a disclosed historical average, a respondent's own estimate on historical average or on average response (Welch, 2000; Kaustia, Alho, and Puttonen, 2006) or it could be something totally uninformative such as a respondent's last four-digits of social security number (Chapman and Johnson, 1999). Both false-consensus effect and the anchoring effect are biases that have empirically been proven to affect decisions in several fields, both among students and among experienced professionals although less attention has been given to the significance of the biases among professionals. In some studies it has been shown that with experience and expertise an individual learns to avoid biases and hence the effect of manipulation among professionals is less evident yet existent than among students (e.g. Kaustia et al). However, Haigh and List (2005) find contradicting results in their experiment as the behaviour of traders is more biased than the behaviour of students.

This chapter provides background information for the empirical experiment that is carried out and gives examples on the psychological factors that affect opinions and forecasts in economics but also in other fields. The analysis of previous studies is done comprehensively in order to better justify the choices made in the survey design of this paper. It also gives an idea on the variety of factors that could affect the opinions and forecasts of professionals in financial industry. Unfortunately though, not all of them can be examined in the empirical study of this paper. In this chapter, framing effect (4.1) and anchoring effect (4.2) will be presented in more detail and other biases referred to in several contexts. Chapter 4.3 concentrates on overconfidence and 4.4 goes through the factors that may affect the sensitivity to be affected by the biases.

4.1. Framing Effect

The observation that decision-makers respond differently to normatively equivalent descriptions of the same problem is called framing effect. Redescribing exactly the same situation by using different verbal description, changing perspective or highlighting a different reference point for comparison in the options or in the outcome can even lead to preference reversals. Changes in preference that result from the framing effect have been a popular topic for research ever since Tversky and Kahneman first published their widely cited experiment on the Asian disease problem in 1981[8]. In the experiment there should not have been any systematic preference to any option as the expected outcome of all the options was the same. However, by simply shifting the reference point of the outcomes led to significant changes in the preference of choice. The central idea in their study is that the choice between options with equal expected value depend on whether the options are described in positive terms (lives saved) or in negative terms (lives lost).

The most popular domain in framing effect studies has been *health*, perhaps inspired by the study of Tversky and Kahneman. Also *business* and *gambling* have been popular domains for academic research on framing effect (see Kuhberger, 1998). A few of the more recent studies on framing effect have been focusing on classifying the effect rather than trying to prove its existence. They provide a useful basis on understanding the variety of studies accomplished on the framing effect. Levin, Schneider and Gaeth (1998) and Kuhberger have found

---

[8] Since the original risky choice framing study by Tversky and Kahneman will be referred to in the text several times, it will be presented here as in 1981 (Tversky and Kahneman, 1981, The Framing of Decisions and the Psychology of Choice. *Science*, p. 453-458; see Tversky and Kahneman, 1986). It also provides some background and understanding of the simplicity and significance of framing effect as a phenomenon.

Problem: Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows [The result of preferences in parentheses for each case]:

If Program A is adopted, 200 people will be saved. [72%]
If Program B is adopted, there is 1/3 probability that 600 people will be saved and 2/3 probability that no people will be saved. [28%]
Which of the two programs would you favour?

Now consider this problem with a slightly different verbal description of the outcomes:
If Program C is adopted, 400 people will die. [22%]
If Program D is adopted, there is 1/3 probability that nobody will die and 2/3 probability that 600 people will die. [78%]
Which of the two programs would you favour?

characteristics that tend to support the effect. Both studies have also been able to explain some contradicting results in earlier studies by distinguishing different types of the effect. By recognising the type of framing manipulation that has been used in a study, the average effect size of a bias in each category seems more evident. Both studies distinguish reference point framing from outcome salience framing and also suggest other categorizations. By distinguishing different types of framing as well as recognizing supporting characteristics in each type, understanding the framing effect in prior studies and planning studies that use the manipulation in future is more straightforward. The major types of framing will be presented here shortly to provide support for choices made in the empirical experiment of this paper.

4.1.1. Categorizing the types of framing effect

Levin et al (1998) categorized different kinds of framing effects into three subgroups based on what is framed, what is being affected and how the effect is measured.

- *Risky choice framing* (also *prospect framing* or *reference point manipulation*) which was first introduced by Tversky and Kahneman in 1981 is probably the form the most associated with the term 'framing'. Typically the studies that fall into this category present a hypothetical decision scenario such as the one in the Asian disease problem with only two choice options of which one is a riskless prospect and the other is a two-outcome risky prospect with specified probabilities for the outcomes. In the positive frame the outcomes are framed as gains and in the negative frame as losses. In most studies, people tend to be more risk averse when the choices are positively framed. That is, people prefer to save 200 lives than to choose the risky option with the same expected outcome. But when the choices are negatively framed, people are more willing to take risk and prefer the risky choice to losing 400 lives (with the same expected outcome in both choices).

- In *Attribute framing* (also referred to as *outcome salience*) a characteristic of an object or an event serves as the focus of framing manipulation. That is, only a single feature is framed whereas in the risky choice framing all the options in an independent choice set are framed. Another fundamental difference between the two framing categories is that in attribute framing the presence of risk is not essential and thus there is no manipulation of risk either. Typically, positive framing of attributes leads to more favourable evaluations than negative framing. For example, consumers will most likely prefer 98% fat-free

yogurt to 2% fat yogurt. Or survival rate of 60% sounds better for a patient's ears than mortality rate of 40% before going to a surgery. Or 25/40 questions answered correct in an exam (success) sounds better than 15/40 (failure) answered wrong. In these examples there is no risky choice but instead a characteristic of a sentiment or a product is framed and that affects the evaluation.

- In *Goal framing* more than one aspect of the message can be framed but the goal of the messages will always remain the same. The key in goal framing is to affect the persuasiveness of communication and find the most persuasive impact on achieving a certain result. Depending on the situation, either positive or negative frame can have a greater persuasive impact. Sometimes it is better to stress the positive consequences of performing an act and sometimes the negative consequences of not performing the act. For example, consumers are found to be less willing to bear the cost of a surcharge for paying with credit card than to forego a discount for paying with cash. Hence, the prices should include the option to pay with credit card and in case you pay with cash you will get a discount rather than having lower prices and paying extra for credit card payments even though the outcome (the total price) will eventually be the same.

- Various experimental studies use other framing methods than the three presented above. For example in a gambling related decision scenario, some are told that they are ahead of others *n* previous gambles; others are told that they are behind *n* previous gambles. The additional information provided should not have an effect on the decision-making. However, some studies have proven that it leads to preference reversals (see Levin et al).

Kuhberger (1998) concentrated on analysing prior studies of risky choice framing. The meta-analysis of 136 empirical papers shows that the overall framing effect for all studies collectively is of small to moderate size. However, the studies are highly heterogenic in terms of the framing method employed, and also the effect size varies greatly between studies. To recognise the conditions that are apt to produce the framing effect, potentially relevant characteristics in each study were examined. The meta-analysis illustrates that the magnitude of the framing effect is highly dependent on the procedure and the methods used in a study. The characteristics can be divided into a few broad categories of which the two most important - risk characteristics and task characteristics - are presented here.

- *Risk characteristics* can be divided into subcategories depending on the risk manipulation method, the quality of risk and the number of risky events used. First, *the risk manipulation* can be done by reference to a risky event such as in the Asian disease problem. It this case there is a risky event that comes up or does not come up in some probability in the future and the idea is to change the reference point in options. The risk manipulation can also be done by outcome salience where the notion of risk is applied to description of currently existing state that is labelled in two different ways (e.g. 80% survival rate vs. 20% mortality rate). Of these two, the former is found to have a strong framing effect whereas the latter only shows framing effect in a few studies. Second, *the quality of risk* can be presented in two ways. There can either be a sure option and a risky option or only risky options. The problem with having only risky options is that considering which one is more risky can be arbitrary and depend on the respondent. The sure/risky –model also used in the Asian disease problem supports the framing effect more than the risky/risky –model. Third, the studies differ in *the number of risky events* in alternatives. The effect size is stronger in single risk studies than in multiple risk studies.

- *Task characteristics* can also be subcategorized in order to provide further understanding on the differences in framing studies. First, *the framing manipulation* can be divided into two distinct forms. The manipulation can be done explicitly by changing the gain/loss wording or implicitly with task-responsive wording where no words that convey positive or negative meanings are used. After an outlier analysis framing manipulation methods have similar framing effect sizes. Second, large differences in effect size were found based on *the response mode* used in a study. The framing effect was found to be five times stronger in studies where respondents had to choose from options than in studies where respondents had to rate or judge something. Other distinctions between studies can be made based on the *comparison* method used (within-subject/between-subjects), on *the unit of the analysis* (individual level/group level) or on the *domain* studied.

In Kuhberger's meta-analysis, the most efficient characteristics in predicting the effect size were risk manipulation, response mode and the quality of risk. Furthermore, a linear relationship was found between the effect size of a design and the similarity with the Asian disease design - the more similarities, the more efficient the design ($R^2 = 0.89$).

4.1.2. Framing effect in forecasting stock prices

Glaser, Langer, Reynders and Weber (2006) examined the framing effect in stock market predictions by submitting a survey among students in two German universities. They studied whether the results of asking for prices differ from results of asking for returns for seven individual stocks. For each stock, a price chart over the last six-month period was provided of which some were upward or downward sloping and some were fairly flat. The respondents were divided into three subgroups. The first subgroup was asked to forecast future price levels, the second subgroup to forecast future returns and the third group to forecast future returns but were also provided with more information on historical returns. Having past returns disclosed had no significant effect on the results. However, Glaser et al found a highly significant framing effect in using different elicitation modes (asking for price levels vs. asking for returns). For upward sloping stock price trends the estimated future returns were significantly higher in the group forecasting returns compared to the group forecasting prices. For downward sloping trends however, the estimated future returns were significantly lower in the 'return forecast' group than in the 'price forecast' group. Both the results are statistically significant at the 1% level.

4.2. Anchoring effect

In everyday judgments the anchoring effect describes the phenomenon where the construction of values is affected by an anchor or starting value. The basic idea behind the effect is that a decision maker first focuses on the anchor and then makes adjustments towards one's final estimate. However, as the adjustments are not sufficient it means that the estimate will be biased toward the anchor. Thus far, the anchoring effect has been shown to exist in several fields such as in the pricing and rating of simple gambles, in the estimation of probabilities, in answers to factual knowledge questions and in predictions of future returns (see e.g. Chapman and Johnson, 1999). Anchoring is also described as a cause of preference reversals, which suggests that the anchoring effect would be closely related to framing effect described in the previous chapter.

Tversky and Kahneman (1974) were the first to introduce 'the anchoring and adjustment' phenomenon in their experiment where the estimates for the percentage of African nations in the UN were assimilated toward a given standard. The participants were first asked to

evaluate whether the percentage of African nations in the UN was higher or lower than the disclosed anchor of either 10% (low anchor) or 65% (high anchor). In the second task, participants were asked to give their best estimate of the correct percentage of African nations in the UN. The average estimate of participants who had received the high anchor was 45% while the average estimate in the group of participants who had received the low anchor was only 25%. The results in classic experiment of Tversky and Kahneman and in many other earlier studies have however been questioned in terms of their significance in real life as the questions used in the experiments usually do not represent a realistic decision-making situation for most individuals. Yet, Kaustia et al (2006) found the classic framing effect to influence in the field of finance as well. Their experiment tested the effect of high anchor (20%) and low anchor (2%) in forecasting stock market returns. Kaustia et al find that both students and professionals were biased in the direction of the anchor as those who were exposed to the higher anchor show significantly higher future return estimates of 9.2% compared to 7.4% in the low-anchor group.

An anchor can be informative in that it provides information on e.g. the historical average or on the public opinion. Also an anchor without a numerical value has been proven to have an effect. Anchoring has been found to occur even when the anchor is obviously random or irrelevant, suggesting that activation of similar features does not occur merely because subjects think the anchor is informative. Several studies (e.g. Chapman and Johnson, 1999; Mussweiler and Strack, 1999) have found that the anchoring effect is in fact larger for implausible anchors than for plausible anchors. A plausible anchor is influencing the responses in real terms so that the estimates are anchored around it whereas an implausible anchor is first adjusted to a more appropriate comparison value and then the target object is compared to the selected standard, which in most cases will be more extreme than the plausible anchor. Hence, they find that the implausible anchor can even have a bigger effect on the final estimate. Even when subjects were told the direction in which the anchor would affect their responses, they were unable to avoid the bias (see Mussweiler and Strack). Using fund managers as subjects in an experiment, Montier (2006) finds that not even professional investors can avoid falling into the flaw of being affected by an obviously irrelevant anchor when asking for return forecasts. The fund managers were first asked to write down the last four digits of their phone number after which they were asked to estimate the number of doctors in London. Those whose last four digits of the phone number are above '7000', on

average estimated there to be 8000 doctors in London. Correspondingly, the fund managements with phone number below '3000' on average estimate the number of doctors to be 4000. The influence of the frame is striking especially when without a doubt each respondent realises that phone number has nothing to do with what was being asked to estimate.

An anchor can be predetermined by a researcher or it can be a self-generated anchor by the respondent. Several studies (e.g. Welch, 2000; Kaustia et al, 2006) have found empirical evidence showing that both of the types of anchors have a significant effect on one's responses. Welch (2000) studied the views of academic financial economists on the equity premium and on the perceived professional consensus on the premium. The results show that professionals perceive the consensus of the economists to be 0.5%-1% higher than it really is. In other words, they believe their colleagues' forecasts on equity premium to be higher than they actually are. Moreover, Welch found evidence showing that financial economists anchored their forecasts on equity premium on the perceptions of the professional consensus (self-provided anchor). Thus it could be, that the equity premium estimated by a respondent is in fact a compromise between the respondent's own opinion and one's perception on the professional consensus estimate. Also, roughly a fifth gave a future equity premium estimate, which *equalled* to the historical average that was disclosed in the survey (predetermined anchor). In one of the experiments of Kaustia et al (2006) the subjects were first either provided a historical return of 4.5% over the past century or they were asked to give an estimate of their own on what the historical return in Europe has been over the past century. Then, all subjects were asked to forecast the future market return for the European markets. The average expectations (4.6% in the 'disclosed' group) imply that regardless of whether the historical return was disclosed or self-provided, the subjects anchor their future expectations strongly to the historical number. Interestingly, those who provided the historical number themselves expected nearly twice as high return rates than those who had the actual historical return disclosed.

Mussweiler and Strack (1999) examined the effect of anchors and change in the question wording. The respondents were either asked to indicate whether the target object is larger/older/higher than the anchor value or they were asked whether it is smaller/younger/ shorter than the anchor. The experiment is different to the one by Tversky and Kahneman

(1974) on the number of African nations in UN in that instead of asking whether the correct answer is lower *or* higher than the anchor, they are now two separate questions. According to the theory on hypothesis-consistent testing, different forms of question should initiate a search for evidence in the given direction. That is, when participants are asked for e.g. whether Gandhi is older than 79, they should selectively search for evidence supporting that he *is* older than 79 and vice versa. As a result, absolute estimates should be higher in the 'older' condition than in the 'younger' condition. The anchors were either one standard deviation higher or lower than the mean estimates given by a calibration group. Half of the questions included a high anchor and the other half included a low anchor. Thus, four different question formats were created from the combination of high versus low anchors and 'larger' versus 'smaller' question wording. Finally, the respondents were asked for an absolute estimate (e.g., 'How old is Gandhi?'). Overall, the respondents gave 21% ($p<0.001$) more outside-one-standard-deviation answers to the larger/smaller questions than calibration participants. The differences in comparative judgments were not dependent on the anchor or on the wording of the comparative question. High anchors led to significantly higher absolute estimates than low anchors. Also the absolute estimates were influenced by the comparative question in that higher estimates were made for the 'older' question than for the 'younger' question. This implies that the estimates were also dependent on the direction suggested by the question wording.

4.3. Overconfidence

Theoretical models in psychology studies have shown that overconfidence of an individual affects one's behaviour in several fields. People tend to be overconfident about their own abilities and knowledge and the effect is found to be the most significant in difficult tasks such as forecasting with low predictability. Hence, the phenomenon has its effects on an individual's behaviour in financial markets as well.

Various studies have shown that financial professionals on average are overconfident and suffer from optimism bias. Montier (2006) finds that 74% of fund managers perceive themselves as above average at their jobs while only a small minority believes that they are below the average. Lewellen, Lease, and Schlarbaum (1977) analyzed individual investors and found that overconfident individuals trade more, believe returns to be highly predictable and expect higher returns than what less confident people do. In a more recent study Odean

(1998) finds consistent results in that overconfident investors trade more, as they believe their knowledge about the market and the asset valuation to be superior to other investors'. However, greater trading does not lead to better performance but it instead decreases the expected utility and net investment performance. This proves that an investor's overconfidence can be of great damage for one's wealth and more importantly a professional's overconfidence can be very harmful for a client's wealth. In the study of Glaser et al (2006; see also 4.1.2.) the German students who forecasted either future prices or future returns were also asked to give the upper and lower bound of a 90% confidence interval for their estimate. Compared to the historical volatility of the stocks the confidence intervals were too narrow, which suggests underestimation of volatility or overconfidence of the respondent. Overconfidence was significantly lower in the 'return forecast' group compared to the 'price forecast' group but the reason for this result is yet to be explored. Deaves, Lüders, and Schröder (2005) examined the overconfidence in making stock market expectations among German financial professionals. They find that the professionals are not just overly confident but that they also become more confident after being correct in the previous forecasts when measured by the 90% confidence level of forecasts. Interestingly, the adjustment to wider confidence interval after a failure to forecast accurately is smaller than the adjustment to a narrower confidence interval after a successful forecast. This can be explained by a well-known psychological phenomenon of cognitive dissonance, which suggests that people prefer to forget their failures and rather remember their successes of past performance.

Differences in the overconfidence between genders have also being proven to exist in empirical studies. Levellen et al (1977) and Barber and Odean (2001) find that men tend to behave more like a typical overconfident investor compared to women and hence to be more overconfident on average. Furthermore, men are found to feel more competent in male-dominated fields such as finance and to have riskier preferences than women (Barber and Odean).

4.4. Factors influencing the sensitivity to be exposed to behavioural biases

Prior empirical research shows that demographic and socioeconomic factors have an influence on individual's behaviour in several fields, including financial markets. Using the same database as Barber and Odean (2001), Korniotis and Kumar (2006) find support for previous studies that have empirically proven the relation between overconfidence and age. They find

that older investors have better knowledge about investing and hold less risky and more diversified portfolio. Simultaneously however, investment skill itself deteriorates with age, which leads to lower risk-adjusted returns. The finding is consistent with the theoretical predictions of lifecycle models and learning models, which underline the positive effect of experience as well as with psychological evidence on aging, which suggests that cognitive abilities decline with age. Korniotis and Kumar also find that the negative age effect is less apparent in the group of individuals with higher education and higher income. Overconfidence decreases with age and hence it is the young investors that have the largest overconfidence on one's own knowledge.

The empirical evidence in several studies shows that experts and other more sophisticated individuals suffer less from behavioural biases such as the anchoring effect. Kaustia et al (2006) finds that expertise indeed decreases the effect of behavioural biases. In their study, students show a significantly higher anchoring effect than financial professionals. Moreover, they find less sophisticated students to anchor their return estimates more than the group of more sophisticated students. Yet, it seems that there are limits to sophistication too as regardless of the level of expertise or length of work experience no difference among the professionals was found. In the framing study of Glaser et al (2006) a further comparison between students who study finance and those who do not study finance shows that financial education decreases the effect of framing. That is, the difference between asking for prices and asking for returns is smaller in the group of more sophisticated students. Moreover, more sophisticated students were less overoptimistic than other students. Yet, not all studies have agreed with Kaustia et al and Glaser et al in that expertise decreases the risk of being affected by psychological biases. Contrary to prior studies, Haigh and List (2005) find a behavioural anomaly to be even stronger among professional derivatives traders than among undergraduate students in their experiment of betting behaviour. This only suggests that more research is needed in the field of behavioural finance to determine what role expertise plays in professionals' decisions and market expectations.

5. EMPIRICAL RESEARCH

In order to provide answers to the research questions introduced in chapter 1.2 a large-sample survey among investment advisors was carried out. The results of the survey provide investment advisors' views on the future stock market returns and evidence on the underlying factors behind the return expectations. The effect of framing manipulation is tested in an experiment in order to find out whether psychological factors affect investment advisors' opinions on the relations between certain firm characteristics and future stock returns. A descriptive analysis on the Finnish investment advisors and their work[9] is also provided. Before the analysis of results, chapters 5.1 - 5.3 describe methodology, data, survey design and data cleaning. Chapter 5.4 goes through the main descriptive statistics on Finnish investment advisors. Return expectations for the European markets and the emerging markets are reported and analysed in chapter 5.5. After first going through the overall return expectations and the perceived professional consensus, the chapter analyses the expected returns conditional to demographic variables. Also, the sources of information that investment advisors use in making the return forecasts are examined. Chapter 5.6 introduces the results of the experiment regarding the relations between firm characteristics and stock return forecasts of investment advisors. With regards to firm characteristics, the results are mainly examined in view of the framing effect. Finally, chapter 5.7 brings the empirical research to a close by discussing the shortcomings of the study.

5.1. Data and methodology

The empirical research was carried out by using a web-based survey targeted to Finnish investment advisors. The survey was sent to 1465 investment advisors who have passed the first level examination organised by FASD as at 20.05.2005 and have given permission to use their contact details for research purposes. Those investment advisors who have not passed the test were excluded. Even though the sample will be somewhat biased in that only the ones that have passed the examination are included in the sample, it is not clear whether the results would be any different if the sample comprised of all investment advisors. There is no reason to believe that those who have attended the examination would be any different to those who

[9] Although it later became clear that the title of some of the respondents is not 'investment advisor', for simplicity the entire group is referred to as investment advisors in this survey. In fact, the descriptive analysis is broadly on those who have passed the first-level FASD examination.

have not, as most commonly it is the employer who decides whether the employees should attend.

The main idea in designing the cover letter that was sent by email and the survey layout online was to make them as appealing and respondent-friendly as possible in order to achieve as high a response rate and as credible results as possible. The survey was carried out as a web-based questionnaire in which both multiple choice and open-ended questions were used. Before the final questionnaire was determined, the questions were tested with a small group of investment advisors who gave their ideas for improving the clarity and relevance of the questions. For example, the initial questionnaire posed the questions on expected market premium instead of expected market returns. As the term 'market premium' is not widely used in investment advisors' daily work and it could induce different interpretations of the term, the questions were posed in terms of expected stock market returns. Furthermore, the online system was tested in order to prevent any problems one could face when answering the questionnaire.

The participants were notified on the research by e-mail, which had a link to the questionnaire. The participants were given time to answer the questionnaire from 18.5.2006 to 31.5.2006. As at 27.5.2006 a new question was added regarding a respondent's current position and a reminder was sent to those who had not yet responded to the questionnaire. By extending the deadline, those who had been out-of-office but returned to work before the deadline and those who were not sure whether the survey was targeted to them were also able to participate in the survey. Out of the 1465 emails sent, 368 were either undeliverable or the recipient was out-of-office for the whole period during which the survey was carried out. Hence, 1097 emails were finally delivered during the period to 31.5.2006. The questionnaire was answered 762 times. After filtering out some double answers[10] and those who had answered the questionnaire but had not passed the first level FASD examination the total number of respondents was 742, which is 68% of those who received the email by 31.5.2006. Given the very high response rate of the survey, the risk of non-response bias is small.

[10] For example some had started the survey by first answering a few questions but then quit the survey and started all over again later. In these cases the first time a participant has answered is ignored.

With regards to the analysis of professional consensus, the consensus expectation as well as the perceived expectation among investment advisors is simply given by the arithmetic average of all expectations. Also an average, which excludes the highest return expectations is provided in order to prevent the effect of overly optimistic expectations. The false-consensus effect is measured by comparing the real professional consensus and the perceived professional consensus. The significance of the bias is then tested with the standard two-sample t-test on difference[11]. All comparisons between demographic groups are done similarly by comparing the arithmetic average expectations among certain groups and then testing the significance with the standard two-sample t-test on difference.

In addition, a regression analysis is used to further examine some of the results on expected returns. First, a logistic regression is used to find out which variables affect one's perceived ability to make return forecasts. The level of confidence is used as a dependent variable and demographic factors and the employer of an investment advisor are used as explanatory variables. Second, a linear regression analysis is carried out to determine which variables of an investment advisor affect one's long-term return forecast for the European stock markets. The long-term return expectation for the European markets is used as a dependent variable and demographic factors, employer as well as the confidence level of an advisor are used as explanatory variables. The same regression model with small changes is run for certain subgroups. The regression models itself as well as all the results are described in more detail in relation to the regression analyses.

With regards to the third part of the survey where the effect of firm characteristics to investment advisors' expected returns is examined, some statistical tests and regression analyses are also carried out. First, the chi-square goodness-of-fit test[12] measures whether there are statistically significant differences between different framing settings. That is, the

---

[11] $$\underline{t} = \frac{\bar{x}_1 - \bar{x}_2 - \delta}{\sqrt{\frac{\underline{s}_1^2}{n_1} + \frac{\underline{s}_2^2}{n_2}}} \sim t(v)$$

[12] $$z'' = \frac{\underline{p}_1 - \underline{p}_2}{\sqrt{\underline{p}(1-\underline{p})\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \sim N(0,1)$$

test computes whether any statistically significant evidence on framing effect can be found in this study. Second, the test measures whether the results of two framing settings could be combined and regarded as one group. The analysis is also carried out for the subgroup of investments advisors who can be regarded as experts.

5.2. Survey design

In the beginning of the survey, the participants are instructed to respond to all the questions based on their own opinions. Also, in the questions related to return expectations and the relations between firm characteristics and return forecasts more specified instructions on answering the questions were provided. The questions on expected returns were posed in a way, which an investment advisor would face them in his daily work – that is, in a situation where a client asks for the investment advisor's view on expected returns. The number of questions was limited to minimum so that answering the questionnaire would only take five minutes of a respondent's time and consequently more people would have time to participate in the survey. After answering the survey, the respondents had a choice of taking part in a lottery where three randomly selected participants won a book price. Also, for those interested in the results, a summary of the main results was provided. The questionnaire was carried out in Finnish and can be found in Appendix 2a. The survey is also translated in English in Appendix 2b. The original questions with layout of the online-based survey can be found in a test version at http://www.surveymonkey.com/s.asp?u=57672266385[13]. The structure of the survey is broadly divided into three sections.

The first part of the survey poses questions on demographic factors of the respondent as well as questions on his or her work experience, current employer, personal clients and meetings. The questions on demographic factors, work experience and employer were posed so that potential correlations between any single factor and responses for the questions in the second and the third section could be revealed. For example, the analysis reveals whether the return expectations are any different in the group of university graduates compared to those with a lower education. Similarly, the analysis compares the return expectations of different age

[13] The test version and the appendices include the first and the second format of the questions on the relationship between firm characteristics and expected stock returns to introduce the different framing formats, which are further explained later in this chapter.

groups and genders. In addition, the responses to the questions in the first section are used in a descriptive analysis on Finnish investment advisors.

The second section asks the respondents to forecast the future average returns in European stock markets (EU-15) and the emerging stock markets. In questions 13 and 15 the respondents are asked to predict the annual average stock returns in short-term (1-year) and long-term (20-year) horizons for both European stock markets and the emerging stock markets. Question 14 asks respondents to predict how other investment advisors would advise their clients in question 13 regarding the average future returns in European stock markets. Question 14 is designed to demonstrate how an investment advisor sees his colleagues to predict future returns. It also shows whether investment advisors on average are more optimistic or pessimistic than they think they are on future stock market returns. Furthermore, the question will test whether or not their own predictions are anchored to their perception of other investment advisors' forecasts. The respondents are also asked to indicate which sources of information they use when determining the expectations on the future stock market returns. Alternatives for the sources of information are provided but one can also choose a source outside the seven alternatives offered. Finally, question 17 asks the respondents' perception of one's own ability to forecast future returns compared to other investment advisors. This question is posed in order to find out whether for example higher education or certain employer increases an investment advisor's perceived ability to make market return forecasts. It also shows if an investment advisor on average perceives him self as better or as worse at making forecasts of future returns than his colleagues, which would either reflect an average overconfidence or lack of confidence on an investment advisor's ability to forecast. The potential differences in market forecasts between these 'confidence groups' will be tested as well.

The third section of the survey focuses on propositions on whether a certain firm characteristic affects the expected future return of a stock and if it does, is the effect positive or negative. A series of four propositions comprise of evaluating the following firm characteristics and their effect on returns: liquidity, leverage, growth prospects of a company and analyst coverage in terms of the number of analysts following the company. Liquidity was selected as one of the characteristics to be assessed, as it is commonly known and discussed variable of a stock investment. It is also one of the factors that have been

acknowledged to be related to the size effect of an asset as discussed in 3.1.1. Furthermore, liquidity was selected over firm size as the size of a firm is less acquainted as a risk factor and yet they are closely related (Amihud, 2002). Another well-known risk factor of a company is the debt/equity -ratio. Many studies (e.g. Bhandari, 1988; Fama and French, 1992) as well as the financial theory have shown that the expected return should increase with leverage. To test whether Finnish investment advisors agree with this in practice, a question on the relation between leverage and return was included in the survey. It has been acknowledged that investors tend to prefer stock of 'good companies' as investments. In some studies however (see Helander, 2005), it has been shown that growth prospects correlate negatively with realized returns. The consensus expectation among analysts is selected to this survey to test whether the growth prospects affect the return expectations of investment advisors and if it does, to what direction. To test whether the empirical evidence of Helander (2005) on the positive relation between the number of analysts following a company and stock return holds among investment advisors, the analyst coverage is also included in the experiment.

To analyse the relation between firm characteristics and expected returns on an asset comprehensively, three different formats on the propositions were formed so that one respondent only answered in a series of one format of propositions. The use of three different formats of the same propositions was done in order to reveal whether the framing effect exists in evaluating the relationship between firm characteristics and stock returns. That is, it tests whether the wording or the point of view in the proposition affects the response. The first format (Framing 1) has a different point of view compared to the two other formats (Framing 2 and Framing 3). The first one asks about the effect of firm characteristics on the required stock return whereas the two latter ones ask the effect of firm characteristics on the stock return expectations. The required return and the return expectation should result in the same conclusion in each proposition, that is, regardless of the point of view. Framings 2 and 3 only differ from each other in the wording of the characteristics. The instructions for answering were the same for all, only the propositions slightly differ. Everyone was asked to consider a situation where a company is an average company in all other terms except one mentioned in the question. In Framing 1 the respondents were simply asked to answer *yes* or *no*. For example:

In order to invest in a stock of a company that is more leveraged than average, I would require higher than average return. [Yes/No]

The order and the wording of the propositions were the same for all in Framing 1. Framings 2 and 3 are similar to each other except that as propositions in Framing 2 are about liquidity, high leverage, good growth prospects and less analysts following a company, the propositions in Framing 3 are about illiquidity, low leverage, poor growth prospects and more analysts following a company. That is, the opposite firm characteristics are used in the Framing 2 compared to the Framing 3. In the latter two formats, the order of the characteristics was randomized so that the question about the effect of e.g. liquidity would not always be the first one to be asked. The question for each proposition was the same. For example:

How would the following firm characteristics affect your view on the expected future return for a stock?

A company has more debt than average [Higher return/Lower return/No effect]

The investment advisors were randomly divided into three groups of same size, which were formed in such a way that the groups were as similar as possible. In order to make the subgroups alike, the foreknowledge on the investment advisors was used in the randomization. The groups were equalised in terms of the year when the first-level FASD examination was passed [2001, 2002, 2003, 2004, 2005], gender, employer [Sampo, Nordea OKO, Aktia, Säästöpankki, other][14], year of birth [1941-1958, 1959-1966, 1967-1982] and hometown [Helsinki, other] so that none of these factors could affect the potential differences in results between the different framing formats used in the experiment. Although the setting where subjects are manipulated by using different frames might seem 'unfair' as the respondents are not told the real motivation of the experiment, in reality different clients ask similar questions in a varying way as well. Hence, there are valid implications for practical situations too from the experiment.

[14] In the analysis of the results, the banks have been renamed as *Bank A, Bank B... Bank E, Other*. The banks are not renamed in any specific order and the first option in the questionnaire (Nordea) or in the list above (Sampo) is not necessarily Bank A. However, once a bank has been renamed as e.g. Bank D, it will be Bank D throughout the analysis. *Other* refers to those who are working for a smaller employer outside the options that were given in the questionnaire.

5.3. Data cleaning

Several steps were taken in cleaning the data before the analysis of the return estimates took place. Most importantly, the responses for the expected returns in stock markets had to be trimmed so that all the responses would be in the same format. Only one numerical answer for each return expectation was being asked and hence all comments made regarding the future returns were ignored in the analysis. In cases where a respondent had answered a range of the return expectation, an average expectation within the range was taken and included in the analysis. A few responses were modified to adhere to the survey format. Furthermore, some respondents had evidently misread the question regarding the long-term returns and hence the answers most likely reflected their expectation over the 20-year period instead of the annual return, which was asked for. In some cases however, it was unclear whether or not the long-term expectation of a respondent was given on an annual basis or over the whole period. These were treated case-sensitively by looking at the expectations as a whole and then determining whether the misunderstanding of a question is likely. For example a respondent who expects the short-term return for the European markets to be 20-50% and the long-term average annual return to be 50% is very optimistic on the future returns but most likely has not misunderstood the question. In turn, a respondent who expects the short-term return to be 2% and the long-term return to be 40% has more likely estimated the long-term return over the 20-year period rather than on an annual basis as the difference between the estimates is so immense. Hence, the latter respondent's short-term expectation is included but long-term expectation excluded in the analysis and the former respondent's expectations are both taken into account (short-term expectation as an average of the range given = 35%).

5.4. Descriptive statistics

Table 1 summarizes the descriptive statistics on Finnish investment advisors. Overall those who responded to the survey represent well the 1465 people who have passed the first level FASD examination (and given permission to use their contact details). Out of the 742 who responded to the survey 67% are females and 32% males[15]. Although the finance field is widely regarded as male dominated, the fact that two thirds of the respondents in this survey are females does not surprise given that 65% of those who have passed the FASD

[15] The percentages do not all add up to 100% due to rounding and the fact that not all respondents have answered all questions.

examination are females as well. 53% of the respondents have a higher (after high school) education. Interestingly though, the educational background is different among men than women. 77% of men have a university or university equivalent degree whereas only 43% of women have a higher education. All respondents had passed the first level FASD examination by 20.5.2005 and 20% has also passed the second level FASD examination during 2001-2006. Although only 53% of the respondents say they have not passed the FASD II, it is likely that most of those who did not respond the question have not passed the examination. Hence, the percentage of those who have not passed FASD II is likely to be closer to 80% than 53%. 47% are currently working for Bank A, 18% for Bank C and 10% for Bank D. The domination of Bank A employees was expected as nearly half of those who have passed the first level FASD examination are from Bank A (48%). An average respondent is 44 years old and has 6 years of experience in investment advising. Yet it should be noted that not all of the respondents are currently working as investment advisors and therefore the average experience could to some extent measure the work experience in banking or finance.

Table 1 The background of Finnish investment advisors

The table presents the descriptive statistics of Finnish investment advisors in terms of gender, employer, education, FASD II examination, age and work experience. *Responded* and *N* refer to those participants out of the total of 742 who answered each question. *% of total* is the percentage of respondents in each category out of all 742 respondents.

	Respondents	
BY GENDER:	by category	% of total
Women	498	67%
Men	241	32%
Responded	739	100%
No response	3	0%

	Respondents	
BY FASD:	by category	% of total
Not passed FASD II	392	53%
Passed FASD II	147	20%
Responded	539	73%
No response	203	27%

	Respondents	
BY EMPLOYER:	by category	% of total
Bank A	352	47%
Bank B	29	4%
Bank C	132	18%
Bank D	73	10%
Bank E	26	4%
Other	63	8%
Responded	675	40%
No response	67	9%

	Respondents	
BY EDUCATION:	by category	% of total
Comprehensive school	50	7%
Vocational school	171	23%
high school grad	115	15%
University equiv. grad	210	28%
University graduate	184	25%
Responded	730	98%
No response	12	2%

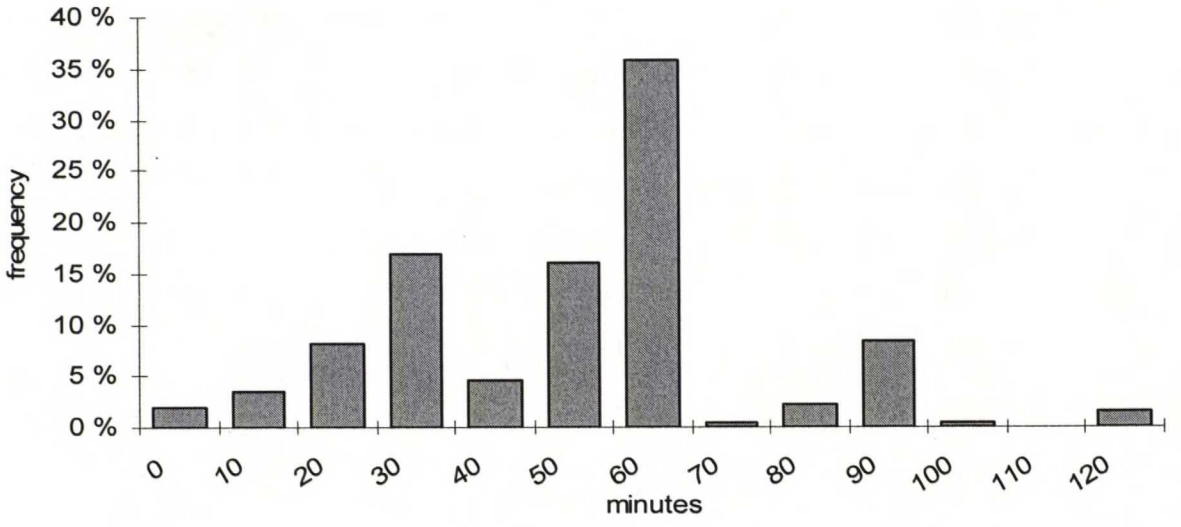
(years)	Average	Min	Max	Mode	Median	N
AGE	44	23	64	41	44	740
EXPERIENCE	6	0	33	5	5	591

In order to get an idea on the magnitude of the investment advising industry in Finland, the respondents were asked to estimate the number of personal customers they manage and the number of investment conversations with clients as well as an average time they spend with one customer per meeting. Although a large portion of the respondents do investment advising only part-time along with other tasks or do not have any contact with clients at the moment, the responses that were collected give an idea on the business. Half of the respondents said that they have less than 100 customers under management, which indicates that they either do no investment advising at the moment or only do it when there is need[16]. Hence, as some of the respondents do not operate as investment advisors and might not have client contacts, these numbers could be somewhat downwards biased compared to the group of those working as full-time investment advisors. 23% has 100-200 customers whereas only 12% have more than 400 customers. What is meant with a client was not explained and hence it could be the case that for example some consider a family as one client and other as several clients depending on the size of a family. As far as the personal contacts with clients are concerned, a third of investment advisors have less than 100 investment conversations with clients annually. The low number of contacts can again be explained with the fact that not all respondents work directly in the investment advising. Roughly another third talks to clients 100-300 times a year with regards to investment issues and the rest have more than 300 conversations a year. The time an investment advisor spends with one client varies quite extensively. One reason could be that some consider a phone conversation as a client meeting whereas other only count personal meetings as a contact with a client. Without further analysis on the issue, it could be the case that those who include conversations on the phone as meetings have shorter average time of a meeting, as it seems logical that a personal meeting takes more time. On average one meeting or conversation between an investment advisor and a client lasts for 49 minutes but most typically it lasts for an hour. Figure 1 shows the distribution of average duration of meetings.

[16] For example the managers of regional banks might take care of customers in need for investment advice, as there is no need for a full-time adviser. Hence, the manager has some client contact throughout the year but the number of clients does not exceed 100.

Figure 1 Distribution of client meeting durations

Figure shows the distribution of investment advisors' average duration of a client meeting. The average durations are classified by every 10 minutes. The frequency gives the percentage of responses for each class. N=596.



5.5. Investment advisors' return expectations

Perhaps the most commonly asked question from an investment advisor is 'how much will the stock markets return in the future?' Although it goes without saying that no investment advisor or other professional can give a correct answer to the question, it is yet a subject in which the investment advisors give their views or recommendations on a daily basis. For that reason, it is interesting to find out what the investment advisors on average expect and how the expectations vary between subjects. To find out the consensus of investment advisors on the expected stock market returns in European markets and in the emerging markets the respondents were asked to give their return forecasts for the two market areas in both short-term and long-term investment horizons. In addition, the investment advisors' perception of the professional consensus was asked to find out whether the investment advisors suffer from false-consensus effect.

This study shows that the market expectations of investment advisors vary significantly between subjects and between demographic groups. That is, depending on the gender, education, age and even employer of the investment advisor, an average recommendation a client receives when asking for investment advice can be significantly different. Furthermore,

the results are similar to Welch (2000) in that the real professional consensus differs significantly from the perceived consensus and hence the professionals on average suffer from false-consensus effect. Interestingly, both the overall results and without an exception all the analyses in subgroups show that investment advisors are expecting European stock markets as well as the emerging markets to underperform the upcoming 20-year average annual return during the next 12 months. Also, overall and by subgroups investment advisors are expecting stock markets to realize positive returns both in short-term and long-term. Chapters 5.5.1 and 5.5.2 go through the overall real professional consensus for both European markets and the emerging markets as well as the perceived professional consensus for European markets. After that, investment advisors' perceptions on own ability to forecast are analysed in chapter 5.5.3. Chapter 5.5.4 looks at the professional consensus conditional to the characteristics of investment advisors.

5.5.1. Consensus for the European markets

The realized return data for the EU-15 area during the past few years shows that on an annual basis the market has been highly volatile in the recent years. The annual return for the European markets has varied between –34.0% and +24.6% during the last four years[17]. The high variance of annual returns also suggests that predicting future returns is a difficult task with very low predictability. Hence, it is no surprise to find that the return expectations of investment advisors in this study vary significantly as well. Table 2 summarizes the results for European market expectations. The table gives data on both the real professional consensus as well as the perceived professional consensus for short-term and long-term. The consensuses are measured by arithmetic average of returns and by mode and median terms in order to better describe the expectations of the advisors. The number of respondents who gave their return expectations is lower than the number of survey participants due to non-response and in case of long-term expectation also as a result of data cleaning (see 5.3)[18].

---

[17] The historical return based on S&P Euro Plus Index, which was launched in 2001. The index covers the stock markets of all euro zone countries as well as Sweden, Denmark, Norway and Switzerland. The annual returns are YTD to 31st December each year in 2002-2005.

[18] To test whether the non-response and data cleaning is related to any advisor characteristic, a regression analysis was carried out. The analysis shows that those who perceive themselves to be better than average forecasters have given return expectation relatively more often than other advisors ($p<0.01$). In turn, women tend to pass the question more often than men ($p<0.001$). It is unclear why the gender effect exists in this case. One explanation could be that those who would have given lower return expectations have passed the question which again would explain the higher average return expectations by women compared to men (see 5.5.4).

Table 2 Return expectations for European markets

The table presents the average stock market return expectations for European markets. The expectations are given in short-term and long-term both in terms of real professional consensus and perceived consensus. *Expected* refers to the expected returns by the investment advisors and *perceived* refers to the perceived professional consensus. *Average* refers to the arithmetic average of all responses, *average ≤25%* is the arithmetic average of responses conditional on being ≤25% and similarly *average ≤30%* is the arithmetic average of responses conditional on being ≤30%. That is, in the two latter ones responses that are over 25% and 30% respectively are excluded in the average. *Median, mode. minimum* and *maximum* expectations are of all responses. *N* equals to the number of respondents in each question.

(%)	Average	Average, ≤25%	Average, ≤30%	Median	Mode	Min	Max	Variance	N
Europe 1-year									
Expected	5.74	5.63	5.68	5.00	5.00	-20.00	35.00	29.62	481
Perceived	8.30	7.96	8.16	7.50	10.00	-10.00	40.00	35.00	438
Europe 20-years									
Expected	10.10	9.52	9.68	9.00	8.00	0.00	50.00	22.93	512
Perceived	12.00	11.06	11.44	10.00	10.00	0.00	50.00	37.52	460

Overall, Finnish investment advisors expect the market to realize a positive return of 5.7% over the next 12 months. In median and mode terms as well as in average terms when the highest expectations are excluded, the expected return in the short-term is only slightly lower. The professional consensus for the short-term return expectation is slightly above the average return of 4.0% in European markets during the past four years and the historical average of 4.5% over the last century in Europe[19]. It is however considerably lower than the average annual return of 9.9% over the last 10 years[20]. Hence, it is difficult to say whether the investment advisors have anchored their estimates to some historical return number, as the average historical return is highly dependent on the time period used for measuring the historical average. In the long-term horizon investment advisors expect European stock markets to realize returns of more than 10% per annum over the next 20 years[21], which

[19] The long-term historical return based on Dimson et al (2002).
[20] MSCI Europe Index as at 31st May 2006.
[21] Throughout the analysis of long-term expected returns it should be kept in mind that some of the advisors' forecasts might be total return expectations for the 20-year period instead of annual expectations. The most evident error answers have been ignored in the analysis. However, in some cases it is highly difficult to evaluate whether a respondent has meant the expectation in annual terms or as a total return. Therefore, it is possible that the average long-term expectations for both European markets and emerging markets are slightly lower than what the average numbers in the analysis suggest. However, the effect should not be significant as the number of the unclear responses is limited.

coincides well with the realized average annual return of 9.9% during the past 10 years. In the long-term expectations, the mode and median expectations are somewhat lower than the professional consensus in average terms. This could in part be explained by the assumption that some have forecasted the equity return over the whole 20-year period instead of on an annual basis. Yet, even the averages, which exclude the highest expectations, are close to the overall long-term average return expectation.

Consistent with the term structure in Welch's (2000) study the term structure of return expectations is monotonically increasing in time. The annual expectations for the European stock markets are higher for the long-term period, which indicates that investment advisors see that over the next 12 months European markets will underperform its average annual return of the next 20 years. Although the term structure was found to be similar as in Welch's study, there is yet an interesting difference as well. Welch found the expected short-term equity premia expectation to be less volatile than the long-term expectations. However, this study finds the opposite, as the investment advisors' long-term expectations for the European market are less volatile than the short-term expectations. Logically thinking the finding makes sense, as short-term returns have historically been more volatile than the long-term average returns. The range in the forecasts for both short-term and long-term are fairly wide yet reasonable given the recent high volatility in annual European market returns. The short-term expectations in this survey vary between –20% and +35%; in the long-term the average annual return of the market is expected to be between 0% and 50%. It is worth noticing that no investment advisor believes the market to realize negative return over the 20-year period.

Looking at the perceived consensus estimates both in short-term and long-term, one can conclude that investment advisors suffer from false-consensus effect in both time periods. The results regarding false-consensus effect support the findings of Welch (2000). That is, on average an investment advisor believes his or her colleagues to expect higher equity returns in future than they really do. Also, an average investment advisor believes the professional consensus to be higher than what it really is. The one-year perceived consensus on stock returns is 8.3% which is statistically significantly higher the real consensus of 5.7% ($t=6.79$, $p<0.001$). Correspondingly in the long-term, the investment advisors' perceived consensus for the annual returns is 12.0% and the real consensus only 10.1% ($t=5.36$, $p<0.001$). This means that on average investment advisors believe that his or her colleagues are considerably more

optimistic on future stock market returns than they really are, both in short-term and long-term horizon. Interestingly though, the median perceived consensus for the short-term expectations was 7.5% whereas the most common answer (mode) was as high as 10.0% (and the average perceived consensus 8.3%). In the long-term consensus forecasts, both the median and mode were 10.0%, which in fact are close to the real consensus of 10.1% but are both far below the average perceived consensus of 12.0%. In mode and median terms, the conclusions on the existence of the false-consensus effect remain the same as in mean terms but the effect size of the bias varies depending on which measure of 'centre' is used in the analysis. Figures 2 and 3 give the distributions of return estimates for European markets in short-term and long-term respectively.

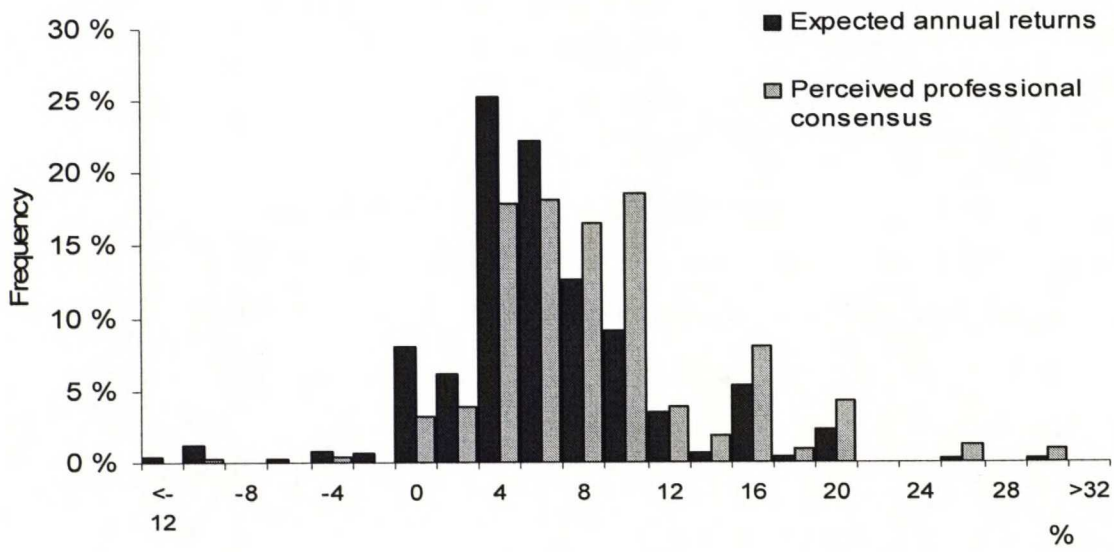


Figure 2 Distribution of short-term return expectations for European markets

The figure shows the distribution of investment advisors' expected short-term returns and perceived consensuses for the European markets. The first histogram is given by the return expectations for each class (by every two percentage points). The second histogram is given by the perceived professional consensus estimates. Both estimates are on a 12-month horizon. N(expected return)=481, N(perceived professional consensus)=438.

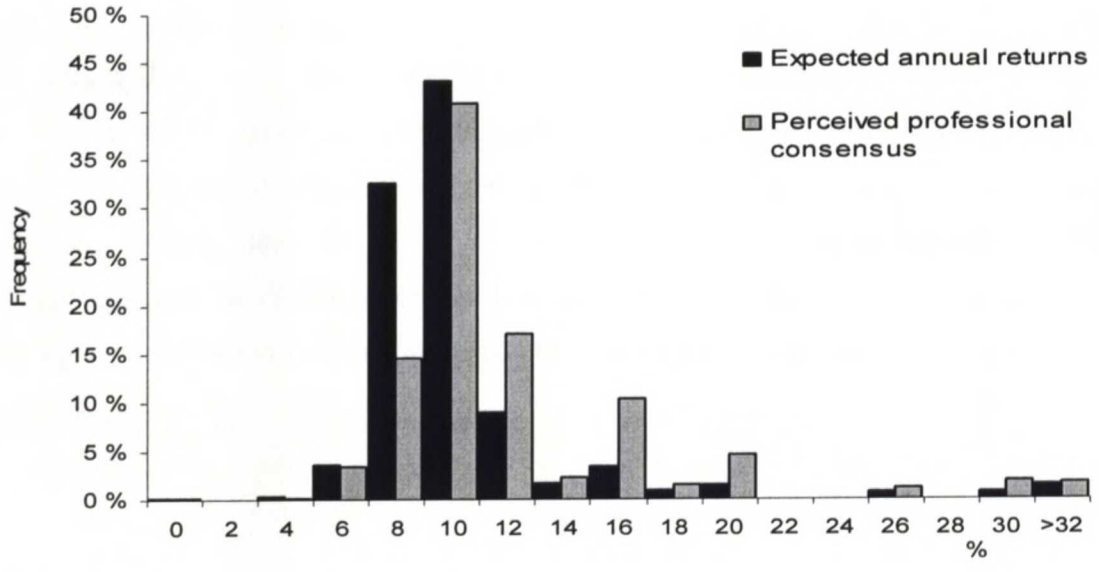


Figure 3 Distribution of long-term return expectations for European markets

The figure shows the distribution of investment advisors' expected long-term returns and perceived consensuses for the European markets. The first histogram is given by the return expectations for each class (by every two percentage points). The second histogram is given by the perceived professional consensus estimates. Both estimates are on a 20-year horizon. N(expected return)=512, N(perceived professional consensus)=460.

5.5.2. Consensus for the emerging markets

Overall it can be noticed that investment advisors perceive the emerging markets to be far more profitable as an investment than European markets both in short-term and long-term as the expected returns are considerably higher. Moreover, it seems that forecasting returns in the emerging markets is far more difficult than for European markets, which can be concluded by simply comparing the standard deviations and ranges of expectations in the two markets. Table 3 summarizes the findings for both the emerging markets and European markets to make the comparisons more straightforward.

Table 3 Return expectations for European markets and the emerging markets

The table presents the investment advisors' average return expectations on both European markets and the emerging markets in short-term and long-term. For European markets, the expectations are given both in terms of real professional consensus and perceived consensus. *Expected* refers to the expected returns by the investment advisors and *perceived* refers to the perceived professional consensus. *Average* refers to the arithmetic average of all responses, *average ≤25%* is the arithmetic average of responses conditional on being ≤25% and similarly *average ≤30%* is the arithmetic average of responses conditional on being ≤30%. That is, in the two latter ones return expectations that are over 25% and 30% respectively are excluded in the average. *Median, mode. minimum* and *maximum* expectations are of all responses. *N* equals to the number of respondents in each question.

(%)	Average	Average, ≤25%	Average, ≤30%	Median	Mode	Min	Max	Variance	N
Europe 1-year									
Expected	5.74	5.63	5.68	5.00	5.00	-20.00	35.00	29.62	481
Perceived	8.30	7.96	8.16	7.50	10.00	-10.00	40.00	35.00	438
Europe 20-years									
Expected	10.10	9.52	9.68	9.00	8.00	0.00	50.00	22.93	512
Perceived	12.00	11.06	11.44	10.00	10.00	0.00	50.00	37.52	460
Emerging markets									
1-year	11.60	8.24	9.72	10.00	10.00	-40.00	80.00	172.10	449
20-years	15.36	12.87	13.28	12.00	10.00	-1.50	80.00	96.62	487

The average return expectations for the emerging markets are statistically significantly higher than the expectations for European markets, both in the short-term ($t=8.78$, $p<0.001$) and in the long-term ($t=10.7$, $p<0.001$). On average investment advisors expect the emerging markets to return 11.6% in the short-term and 15.4% in the long-term. The short-term return expectation for emerging markets is twice as much as what the expectation for European markets is when measured by not just the average expectations but also by the median and mode expectations. In addition, the variance of the short-term expectations in the emerging markets is nearly six-fold to the variance of the short-term European market expectations and also the range of expectations is considerably wider. This can be explained by the supposition that the short-term predictability of the emerging markets is even lower than that of European markets. Although it was expected that the variance in expectations would be higher for the less familiar and historically more volatile emerging markets, the difference in variances of expectations is yet surprisingly high. As with the short-term return expectations, the annual return expectation in the long-term is higher for the emerging markets than for European

markets in terms of average, mode and median return expectations. The variance of the long-term expectations for emerging markets is again significantly higher than that for the European markets (four-fold). The variance of the long-term expected returns is 40% lower than the variance of the short-term expectations.

When analysing the premium in long-term return expectations for the emerging markets over European markets, the regression model with the premium as a dependent variable cannot explain the premium (Adj. R-Square 0.056) and neither can any single characteristic of an investment advisor. That is, there is no such an advisor characteristic that could statistically significantly explain why the average return expectation for the emerging markets is higher. Yet, the regression analysis shows that the explanatory variables drive the results into an expected direction. First, university education and passing FASD II decreases the emerging markets premium in return expectations (t=-1.09 and t=-1.11 respectively). In turn, those who perceive themselves as worse than average forecasters expect higher premium (t=1.55) than other investment advisors. As will be seen later on, the gender of an advisor plays a significant role in return expectations. With regards to the emerging markets premium, women expect higher premium than men (t=1.67). The age or the employer of an advisor does not relate to the emerging markets premium in any way.

5.5.3. Perceived ability to forecast future returns

After responding to the questions on the expected returns in European markets and the emerging markets, the respondents were asked to evaluate whether they perceive themselves as better, worse or similar in forecasting future returns than other investment advisors. Overall, 10% considered themselves as better, 12% as worse and 79% as average forecasters. Hence, the average confidence level of investment advisors does not suggest either professional overconfidence or lack of confidence. Yet, when those who perceive themselves as worse forecasters are compared to those who perceive themselves as better forecasters, some interesting results that support earlier studies can be found in the average expected returns as well as in the demographic differences of those with different levels of confidence.

Following the earlier studies of overconfidence, the expected returns were the lowest in the group of investment advisors with low confidence both in the short-term and long-term for European markets and in the short-term for the emerging markets. However, the expectations

in the group of high confidence were no higher than in the average confidence group. Furthermore, when the expectations of high confidence group are compared to both the groups of low confidence and average confidence, no statistically significant differences are found. Consequently, no evidence can be found on the relation between the perception of one's own ability to forecast future returns and one's return expectations. The false-consensus effect is at its strongest in the group of 'average forecasters' ($p<0.001$). Table 4 summarizes the expectations by confidence groups.

Table 4 Market return expectations by confidence group

Table presents the return expectations in subgroups which each form a confidence group based on what a subject perceives one's own ability to forecast to be compared to other investment advisors.
Column [1] denotes the statistical significance of the difference between the average return expectation within a confidence group and the real professional consensus.
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus within a confidence group is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return within a confidence group and the perceived consensus within that group.
Statistical significance is denoted in the following way: *** $p<0.001$; ** $p<0.01$; * $p<0.05$.

	1-year, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Better than average	6.11	5.90	0.42	8.82	6.27	3.19 **	-2.14 *
Worse than average	4.51	4.68	-1.62	7.25	6.25	1.42	-2.18 *
No better/ no worse	5.86	5.54	0.31	8.39	5.91	6.55 ***	-5.88 ***

	20-years, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Better than average	9.80	3.12	-0.62	11.29	3.74	2.06 *	-2.15 *
Worse than average	9.27	3.16	-1.63	11.05	4.36	1.32	-2.14 *
No better/ no worse	10.22	5.12	0.35	12.15	6.53	5.04 ***	-4.46 ***

	Expectations for emerging markets					
	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
Better than average	10.13	12.06	-0.78	14.01	5.45	-1.51
Worse than average	9.63	14.17	-0.88	17.08	14.43	0.78
No better/ no worse	11.97	13.05	0.40	15.27	9.60	-0.14

Although no differences in return forecasts between confidence groups was found, some interesting findings in the perceived ability to forecast can be made especially between genders. Following the evidence of e.g. Lewellen et al (1977), and Barber and Odean (2001),

this study shows that the level of confidence is to some extent dependent on gender. This can be seen in the distribution of genders in both the high confidence group and the low confidence group. Only 6% of women and as much as 17% of men consider themselves as better than average forecasters whereas 15% of women and only 5% of men think they are worse than average in forecasting future stock market returns. Interestingly though, the average return expectations of all women are significantly higher than the average expectations of men (see next chapter for further discussion on gender effect).

As far as the education of an investment advisor is concerned some support for earlier studies can be found in that education does increase overconfidence. Interestingly, university graduates are the only educational group that more often consider themselves as better (14%) rather than worse (7%) future return forecasters compared to other investment advisors. In all other educational groups, there are more of those that perceive themselves as below average rather than above average forecasters. In the two lowest educational groups, as many as 18% of the investment advisors perceive themselves as worse than average forecasters. Again, more confident and in this case more educated investment advisors do not expect higher returns than less confident and less educated. Also, it should be noted that perceiving one's own abilities to be above average does not necessarily mean that one is overconfident. More likely, one could explain the confidence with longer experience or higher and more work-related education. Another education related factor that increases investment advisors' confidence level in making forecasts is the FASD II examination. Out of those who have passed FASD II, 13% believe they are better than average at making return expectations while only 3% perceive themselves as worse than average in forecasting. 8% of those who have not passed FASD II are confident that they make better than average return forecasts whereas as much as 16% believe the opposite. The difference in the group of low confidence is considerable and suggests that FASD II examination really increases the confidence level.

When the banks are compared, Bank E has by far the most confident investment advisors when measured with the perceived ability to forecast. 24% of Bank E investment advisors consider themselves as better and none as worse at making forecasts on future returns than other investment advisors[22]. The result is surprising in that Bank E also has the highest

[22] However, it should also be noted that there was only 21 Bank E investment advisors who answered both the questions on the current employer and on one's perception of own ability in forecasting returns.

portion of women as investment advisors out of all banks (77%) and as earlier mentioned only 6% of all women perceived themselves as better than average forecasters. Bank A and Bank B has the least confident investment advisors as in both banks the number of below average forecasters exceed the number of above average forecasters.

To further examine what affects one's perceived ability to forecast, a logistic regression analysis with ten explanatory variables was carried out. The results are summarized in Table 5. The results confirm the preceding conclusions in that passing the FASD II significantly increases one's perceived ability to forecast ($p<0.05$). Also it verifies that the gender effect is indeed statistically highly significant ($p<0.001$). That is, women on average perceive themselves as worse forecasters compared to other investment advisors. Out of the bank effects, only Bank E variable is significant ($p<0.01$) in increasing one's perceived ability to forecast. The evidence found in this study indicates that confidence grows with higher education as earlier noted but the effect is not statistically significant.

Table 5 Regression analysis on the perceived ability to forecast returns

The table presents the results of a regression analysis carried out with an ordered logit model. The model uses 737 observations out of the total of 742. Three observations are missing, as the respondents did not indicate their gender, 2 observations are missing due to non-response to the question on age. *Gender* variable equals to 1 if the subject is female, 0 is a subject is male. *University education* variable equals to 1 if the subject has a university degree, 0 otherwise (lower education or non-response). *FASD II passed* variable equals to 1 if a subject has passed the FASD II, 0 otherwise (not passed or non-response). *Bank (A-E)* variable equals to 1 if a subject is employed by Bank (A-E), 0 otherwise (other employer or non-response). Those respondents who did not respond to the question on the perceived ability to forecast are assumed to be average forecasters. All confidence groups have been taken into account in the model (0=worse than average, 1=average, 2=better than average). The t-statistics are provided in parentheses under the parameter estimates.
Statistical significance is denoted in the following way: *** $p<0.001$; ** $p<0.01$; * $p<0.05$.

Dependent variable: perveived ability to forecast Explanatory variables			
Intercept 1	3.029 (1.899)	Bank D	0.454 (1.174)
Intercept 2	-2.396 (1.190)	Bank E	1.519 ** (7.427)
FASD II passed	0.622 * (4.918)	Age	0.004 (0.001)
Bank A	-0.028 (0.009)	Age squared	0.000 (0.004)
Bank B	-0.323 (0.321)	Unversity education	0.088 (0.117)
Bank C	0.312 (0.737)	Gender, female	-1.060 *** (15.722)

5.5.4. Expectations by demographic factors

This section gives the reader an overview on the differences in return expectations when demographic and other characteristics of an investment advisor have been taken into account. To study the impact of advisor characteristics to return expectations, several sub-analyses were carried out. Yet, only the most important and the most interesting ones are reported here in more detail. Based on the regression analysis, one can conclude that the gender and the perceived ability to forecast are factors that noticeably affect the investment advice received by a client but also several other variables have an effect yet not significant. Without trying to suggest whose advice is the most accurate, this chapter will look at the differences and similarities between certain broad demographic groups.

Keeping in mind the idea that more confident individuals are more risk averse and make higher forecasts as discussed earlier as well as the fact that in this study women were less confident than men in making forecasts, the return expectations by gender are surprising (see Table 6). By and large, women expect higher returns than men from both European stock markets and the emerging markets. In the expectations for European markets, the gender difference is statistically significant in the long-term investment horizon ($p<0.001$, see *row [4]* in Table 6). The differences are however even more evident in the case of expectations for the emerging markets for which women expect a return of 13.5% and men of 8.5% in the short-term and an annual return of 16.9% and 12.7% in the long-term respectively. The gender effect in the emerging markets expectations is highly significant ($p<0.001$) for both 1-year and 20-year periods. The variance of the long-term return expectations is notably higher for women compared to men in both the European markets and the emerging markets whereas difference in variances in short-term expectations is fairly trivial. When analyzing the false-consensus effect by gender, one can find that the effect is highly significant for women in both long-term and short-term regardless of whether the perceived consensus is compared to the real consensus of women or the real professional consensus ($p<0.001$, see *column [2]* and *column [3]* in Table 6). By and large, the same result goes for men as well. It should however be noted that the gender difference can also be due to other factors. For example, women in this study are on average less educated and as will be seen in the next paragraphs less educated expect higher returns than more educated.

Table 6 Market return expectations by gender

Column [1] denotes the statistical significance of the difference between the average return expectation of men (women) and the real professional consensus
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus of women (men) is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return of women (men) and the perceived consensus by women (men).
Row [4] shows the significance of the difference between women and men in each return expectation or perceived consensus.
Statistical significance is denoted in the following way: *** p<0.001; ** p<0.01; * p<0.05.

1-year, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Women	6.03	5.41	0.73	8.11	6.42	5.08 ***	4.12 ***
Men	5.28	5.50	-0.96	8.66	5.04	6.35 ***	5.98 ***
[4]	1.46			-1.00			

20-years, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Women	10.78	5.72	1.78	12.88	7.32	5.75 ***	3.91 ***
Men	8.89	1.87	-5.11 ***	10.59	3.03	1.59	6.36 ***
[4]	5.44 ***			4.65 ***			

Expectations for emerging markets

	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
Women	13.46	13.31	1.84	16.85	11.51	1.87
Men	8.49	12.29	-2.75 ***	12.65	4.70	-4.78 ***
[4]	4.01 ***			5.63 ***		

In this survey, education plays a role when forecasting expected returns as can be concluded from Table 7. Broadly speaking all the expectations for both European markets and the emerging markets decrease with higher education[23]. Those whose highest degree is from comprehensive school expect slightly higher returns than those who have graduated from high school. Again high school graduates' expectations are higher than those of university equivalent graduates. The lowest average expectations are all from the group of university graduates with the exception of 1-year perceived professional consensus for European markets. Overall, the differences in return expectations between educational classes are

[23] Vocational school graduates are an exception to the conclusion. No explanation for this result could be found.

statistically significant in long-term expectations but not in short-term expectations. Furthermore, the variance of individual expectations was the highest for those who only have passed comprehensive school and the lowest for university graduates.

Interestingly, the group of university graduates - although being the most pessimistic themselves on the short-term stock market returns in Europe - expect other investment advisors to forecast returns of 8.8% for the next 12 months, which is higher than what any other educational class expects. That is, university graduates suffer the most from the false-consensus effect in that they expect others to be considerably more optimistic on the short-term returns. Yet, they do not anchor their own expectations on the perceived consensus but instead are close to the real professional consensus. By and large, when the average perceived consensus in an educational class is compared to the real professional consensus, one can conclude that the false-consensus effect is statistically significant in all educational classes. Furthermore, the difference between the average expectations in a given educational class and the perceived professional consensus in the class is statistically significant with the only exception of the comprehensive school graduates. Although the percentage difference between the average expected long-term return within an educational class and the perceived consensus in a given class is the highest in the comprehensive school class out of all educational classes the high variance of responses and the relatively low number of respondents decrease the statistical significance of the difference and hence it is the only educational class where the false-consensus effect cannot be shown to exist.

Table 7 Market return expectations by education

Column [1] denotes the statistical significance of the difference between the average return expectation within an educational class and the real professional consensus.
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus within an educational class is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return within an educational class and the perceived consensus within that class.
Statistical significance is denoted in the following way: *** p<0.001; ** p<0.01; * p<0.05.

1-year, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Comprehensive school	6.04	6.50	0.26	8.31	7.45	1.79	1.25
Vocational school	5.91	4.44	0.33	8.10	5.02	4.10 ***	3.21 **
high school grad	6.23	4.76	0.83	8.72	6.28	3.74 ***	2.68 **
University equiv. grad	5.68	6.02	-0.10	7.78	6.48	3.25 **	2.74 **
University graduate	5.31	5.66	-0.76	8.79	5.35	5.51 ***	4.90 ***

20-years, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Comprehensive school	12.38	8.40	1.59	15.45	8.96	3.30 **	1.43
Vocational school	9.41	3.02	-1.96	11.14	4.95	1.95	3.06 **
high school grad	11.89	6.08	2.58 *	14.28	9.11	3.82 ***	1.90 **
University equiv. grad	9.92	4.94	-0.40	11.71	5.65	3.04 **	2.83 **
University graduate	9.16	2.76	-2.91 **	10.81	3.18	1.97	4.33 ***

Expectations for emerging markets

	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
Comprehensive school	12.97	11.53	0.63	21.43	16.63	2.10 *
Vocational school	12.63	11.93	0.75	13.61	7.48	-2.07 *
high school grad	12.64	14.00	0.60	19.03	11.31	2.74 **
University equiv. grad	11.00	14.32	-0.43	15.51	10.30	0.15
University graduate	10.42	12.51	-0.90	12.64	5.36	-4.14 ***

Although the preceding paragraphs showed that education affects the return expectations of an investment advisor, the FASD examinations do not seem to affect the investment advisors' expectations. The year a respondent has passed the first-level FASD examination does not correlate with the market return expectations. Given that there is only one exception where 2001 graduates are more pessimistic on future returns than other year-groups and no other significant differences are found, one can conclude that there are no differences between year-groups and the exception found seems trivial. Based on the data available in this survey, one

cannot conclude whether there are differences between the investment advisors who have passed FASD I and those who have not and it therefore remains a question to be answered in forthcoming studies. However, it does not seem likely that any significant differences could be found, as no considerable distinction can either be made between the return expectations of those who have passed FASD II examination and those who have not (see Table 8). Given the results of no correlation between FASD I examination and the graduate year as well as the fact that only 20% of the respondents have passed FASD II examination, no further analysis on the different years for passing FASD II was carried out.

Table 8 Market return expectations by FASD II examination

Column [1] denotes the statistical significance of the difference between the average return expectation of those who have (not) passed FASD II and the real professional consensus.
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus of those who have (not) passed FASD II is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return of those who have (not) passed FASD II and the perceived consensus by the same group.
Statistical significance is denoted in the following way: *** p<0.001; ** p<0.01; * p<0.05.

	1-year, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Not passed	5.55	5.24	-0.48	8.10	5.75	5.17 ***	5.05 ***
Passed	5.94	5.71	0.32	9.32	6.23	5.45 ***	4.11 ***
[4]	-0.61			-1.70			

	20-years, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
Not passed	9.91	4.09	-0.57	11.96	5.97	4.22 ***	4.44 ***
Passed	9.49	3.61	-1.53	11.25	4.21	2.53 *	6.36 ***
[4]	1.00			1.26			

	Expectations for emerging markets					
	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
Not passed	12.08	13.05	0.46	15.89	10.28	0.67
Passed	10.22	12.52	-0.98	13.13	5.74	-3.21 **
[4]	1.22			3.28 **		

In relation to expertise and learning, age has also been shown to affect investor behaviour. Korniotis and Kumar (2006) found that with age an investor has better knowledge and takes less risk than younger investors but that the investment performance would decrease with older age. In order to analyse the relation between the age of an investment advisor and the expected returns on stock markets in this study, the respondents were divided into three subgroups. Investment advisors under 40-year old represent 30% of the respondents and those over age of 50 form another 30%. The remaining 40% represent the investment advisors between the ages of 40-49. The results are summarized in Table 9.

Overall, the average expectations within an age group do not differ significantly from the real professional consensus (see *column [1]* in Table 9). In European markets, the group of youngest investment advisors (under 40-year olds) expect the highest short-term returns but the lowest long-term average returns, when measured with both their own expectations and their perceived professional consensus. Also, the youngest investment advisors are the most pessimistic on the return expectations for the emerging markets in both short-term and long-term. The differences between the long-term return expectations of the youngest and the oldest are statistically significant in the long-term but not in the short-term for both European markets ($t=2.15$, $p<0.05$) and the emerging markets ($t=3.64$, $p<0.001$). Interestingly, under 40-year olds seem to be the least unanimous in forecasting short-term returns but the most unanimous on their ability to forecast long-term returns when measured by the variance of forecasts. By and large, the variance of responses is the highest in all the short-term expectations but the lowest in all the long-term expectations among the group of the youngest investment advisors. The false-consensus effect in each age group is in statistically significant level in both short-term and long-term expectations. This applies to both the comparisons against the real consensus within an age group and against the real professional consensus (see *column [2]* and *column [3]* in Table 9). It should however be noted that the results on the relation between the age of an investment advisor and the expected returns is subject to moderate change depending on what individual expectations are taken into account. For example, in the group of over 50-year olds there are more extremely high expectations in the long-term period than there are in the other two groups. Furthermore, although it can evidently be shown that the average expectations vary between *age groups,* the regression

analysis confirms that the regression between the *age* of each individual and expected returns is weak (R^2 less than 0.04 in all cases).

Table 9 Market return expectations by age group

Column [1] denotes the statistical significance of the difference between the average return expectation within an age group and the real professional consensus.
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus within an age group is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return within an age group and the perceived consensus within the same age group.
Statistical significance is denoted in the following way: *** p<0.001; ** p<0.01; * p<0.05.

	1-year, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
under 40	6.35	6.47	1.01	9.94	6.00	7.41 ***	4.80 ***
40-49	5.35	5.26	-0.86	7.63	5.90	3.67 ***	3.87 ***
over 50	5.68	4.54	-0.14	7.42	5.53	3.05 **	2.82 **

	20-years, Europe						
	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
under 40	9.51	3.34	-1.70	11.42	3.58	3.64 ***	4.76 ***
40-49	10.20	5.56	0.23	11.96	7.07	3.28 **	2.69 **
over 50	10.54	4.87	0.99	12.74	6.92	4.12 ***	3.04 **

	Expectations for emerging markets					
	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
under 40	10.71	13.12	-0.69	13.54	5.88	-2.77 **
40-49	11.32	12.92	-0.24	15.11	9.90	-0.31
over 50	12.91	13.40	1.00	17.64	12.25	2.04 *

It was not clear ex ante whether the employer of an investment advisor would have any effect on one's return expectations as no previous empirical evidence has been published on the subject. Yet, this study shows that the role of an employer is significant in investment advising. The empirical results in Table 10 show that there are significant differences in the average expected returns between banks and that the information sources an investment advisor uses to determine the return forecasts vary considerably between banks as well (see chapter 5.5.5 for more details on the information sources). In analysing the relation between

the employer and return forecasts of an investment advisor, some interesting differences in expectations were revealed. Overall, the investment advisors of Bank C had lower expectations than investment advisors from any other bank in both European markets and the emerging markets in short-term and long-term. In fact, the average expectations of Bank C vary considerably from the professional consensus in all market expectations ($p<0.001$, see *column [1]* in Table 10). Furthermore, the return expectations of Bank C investment advisors are not just the lowest but also the least variant within a bank in both short-term and long-term expectations with just one exception. The low variances could partly be explained by the fact that 99% of Bank C employees reported the material provided by the bank as one of the most important sources of information. Hence, as they all use the same material it is possible that the data provided in the material affects the return forecasts in the same way. However, it does not differentiate Bank C from all other banks as employer's material turned out to be the most used source of information in all banks even if not as significant as in Bank C. With regards to the perceived professional consensus, Bank C investment advisors again forecast significantly lower numbers than anyone else (excluding Bank E). In Bank C, the average perceived short-term consensus of 6.1% differs significantly ($p<0.01$) from the average expectation of 4.0% within the bank but is in fact fairly close to the real professional consensus of 5.7%. The investment advisors in most banks suffer from statistically significant false-consensus effect in that the average perceived consensus within a bank is significantly different to the real professional consensus and/or the average expectation within a bank.

Table 10 Market return expectations by employer

Column [1] denotes the statistical significance of the difference between the average return expectation within a bank and the real professional consensus.
Column [2] denotes the significance of the false-consensus effect when the perceived professional consensus within a bank is compared to the real professional consensus.
Column [3] implies for the statistical significance of the difference between the average expected return within a bank and the perceived consensus within the same bank.
Statistical significance is denoted in the following way: *** p<0.001; ** p<0.01; * p<0.05.

1-year, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
A	6.07	5.15	0.79	8.43	5.78	5.85 ***	4.66 ***
B	7.15	3.59	1.67	9.78	6.06	2.93 **	1.67
C	3.97	4.52	-3.40 ***	6.14	4.87	0.69	3.13 **
D	7.28	5.99	1.72	9.51	6.38	3.87 ***	1.76
E	5.33	5.44	-0.34	8.24	5.60	1.80	1.60
Other	6.74	6.89	0.90	10.34	6.96	4.07 ***	2.32 *

20-years, Europe

	Average expectation	Standard deviation	[1]	Perveiced consensus	Standard deviation	[2]	[3]
A	10.66	5.62	1.38	12.44	6.48	4.97 ***	3.28 **
B	11.52	5.87	1.10	15.21	11.09	2.11 *	1.35
C	8.87	1.84	-4.42 ***	10.60	4.03	1.08	3.82 ***
D	9.27	4.34	-1.25	10.33	4.59	0.31	1.12
E	10.83	4.73	0.67	13.06	5.74	2.10 *	1.28
Other	9.30	2.55	-1.83	12.20	5.23	2.54 *	3.27 **

Expectations for emerging markets

	1-year			20 years		
	Average	Stdev	[1]	Average	Stdev	[1]
A	11.37	13.14	-0.22	16.02	10.19	0.85
B	20.33	16.74	2.19 *	21.40	16.22	1.65
C	7.66	8.21	-3.69 ***	12.61	5.52	-3.88 ***
D	15.03	13.22	1.73	15.24	11.30	-0.07
E	14.00	12.71	0.74	16.06	7.39	0.39
Other	14.18	16.76	0.94	14.67	8.88	-0.48

By simply looking at the results by a single factor such as education or gender it is impossible to determine which factors really drive the results. In order to reveal the most important factors that affect an investment advisor's return expectations, a regression analysis was carried out. The regression analysis, which has the average long-term return expectation for European markets as a dependent variable, takes into account 12 explanatory variables that could drive the results. The results are summarized in Table 11 (*specification (1)*).

Overall, the regression model explains 5.6% of the long-term return expectations for the European markets. The results imply that the gender of an investment advisor is the most significant factor in determining one's return expectations ($p<0.001$)[24]. Women expect considerably higher returns than men, which can also be seen in Table 6. The results on perceived ability to forecast suggest that 'worse forecasters' are more conservative with their return expectations than others whereas 'better forecasters' expect the market to return more than what other investment advisors are expecting. The dummy variable 'worse forecasters' reaches the level of statistical significance ($p<0.05$). Variables Age and Age-Squared suggest that age does not play a significant role in making return forecasts. As indicated in Table 5, education is negatively correlated with return expectations but the effect is not statistically significant in the regression analysis. The same conclusion on the negative sign of the regression can be made with FASD II variable in that those who have passed the FASD II expect lower future returns than those who have not passed the examination. However, the significance of the result is lower for FASD II variable than for education variable. The negative t-value for Bank C and Bank D dummy variables imply that both the two banks as an employer decrease an investment advisor's expected future returns compared to other investment advisors.

[24] The regression analysis where non-respondents were excluded instead of being assumed to have answered as described in the previous paragraph was also carried out. The number of observations used in the analysis now decrease to 473 and missing values increase to 269. R^2 is slightly lower at 0.078. In terms of gender, t-value is 3.06 which signifies that the variable is now significant at 0.01 level ($p=0.0023$). The sign of t-values for all variables remains the same and no variable in addition to gender and 'worse forecaster' is statistically significant.

Table 11 Regression analysis on the long-term return expectations

The table reports results from linear regression model, which describes the relationship between long-term return expectation of investment advisors and advisor characteristics. In all specifications the dependent variable is the average 20-year return expectation for the European markets. *Gender* variable equals to 1 if the subject is female, 0 is a subject is male. *University education* variable equals to 1 if the subject has a university degree, 0 otherwise (lower education or non-response). *FASD II passed* variable equals to 1 if a subject has passed the FASD II, 0 otherwise (not passed or non-response). *Bank (A-E)* variable equals to 1 if a subject is employed by the bank (A-E), 0 otherwise (other employer or non-response). *Better (worse) than average forecaster* variable equals to 1 if a subject perceives to be better (worse) than average forecaster, 0 otherwise (worse (better) or average forecaster or non-response). Specification (1) shows the results for the overall analysis, which uses 509 observations out of the total of 742. Three observations are missing due to non-response to the question on gender and 230 as a result of non-response to long-term return expectation or due to data cleaning. Specification (2) shows the results for the subgroup of women (N=326) and specification (3) the results for the subgroup of men (N=183). Missing values in subgroups are due to non-response to the question on gender and as a result of non-response to long-term return expectation or due to data cleaning.
T-statistics are provided in parentheses under the parameter estimates. Statistical significance is denoted in the following way: *** $p<0.001$; ** $p<0.01$; * $p<0.05$. Adjusted R-Square provides evidence on the explanatory power of the model.

Dependent variable: expected market return	Specifications		
Explanatory variables	(1)	(2)	(3)
Intercept	6.279	6.810	7.642 **
	(1.45)	(0.88)	(3.08)
Gender, female	1.599 ***		
	(3.31)		
Age	0.121	0.138	0.092
	(0.58)	(0.39)	(0.75)
Age-squared	-0.001	-0.001	-0.001
	(-0.45)	(-0.27)	(-0.71)
Unversity education	-0.473	-0.842	-0.229
	(-0.91)	(-0.92)	(-0.82)
FASD II passed	-0.542	-0.528	-0.354
	(-1.03)	(-0.63)	(-1.06)
Bank A	0.582	1.258	-0.371
	(0.79)	(1.01)	(-0.87)
Bank B	1.195	2.623	-1.960 *
	(0.98)	(1.39)	(-2.38)
Bank C	-1.360	-1.723	-0.274
	(-1.67)	(-1.27)	(-0.56)
Bank D	-0.899	-0.603	-1.305 *
	(-0.95)	(-0.38)	(-2.36)
Bank E	0.573	0.792	0.838
	(0.46)	(0.43)	(0.92)
Better than average forecaster	0.248	0.573	0.091
	(0.35)	(0.43)	(0.24)
Worse than average forecaster	-1.460 *	-1.409	-1.765 **
	(-1.98)	(-1.40)	(-2.77)
Adjusted R-Square	0.056	0.032	0.059

To further examine the gender effect, which turned out to be the only highly significant factor in the regression analysis, the regression is carried out separately for both genders. The same explanatory variables are used as in the overall regression analysis with the exception of gender variable, which is now excluded. 326 women and 183 men are included in the analyses out of the total of 498 women and 241 men who participated in the survey. The results are summarized in Table 11 (specifications (2) and (3)).

When comparing the Adjusted R-Squares in the two models, it can be concluded that the regression model explains the return expectations of men better than of women (0.059 vs. 0.032). The intercept of the model for men is 0.83 higher than for women, which is surprising given that women on average have higher return expectations than men (see Table 6) and yet no other variable can either explain women's return expectations statistically significantly. Men, whose employer is either Bank D or Bank B, expect lower returns than men from other banks ($p<0.05$ respectively). Also men who perceive themselves to be worse than average forecasters have lower return expectations compared to others ($p<0.01$). Interestingly, the sign of the effect of two of the bank variables varies between genders. Bank A and Bank B as an employer increase the expectations of women but makes men forecast lower returns than investment advisors from other banks.

When the regression analyses for genders is carried out without taking into account employer dummies, the explanatory power of the models decrease considerably. F-values decrease from 1.98 to only 0.77 for women and from 2.03 to 1.57 for men, which imply that the models no longer explain the return expectations. No variable is statistically significant with the exception of 'worse forecaster' variable for men as already noted in the previous model. However, now that the bank effect is excluded, the intercepts for the gender models change so that the intercept for women is considerably higher than for men (9.86 for women, 6.80 for men).

5.5.5. Sources of information used in forecasting future returns

To find out what sources of information an investment advisor uses in the forecasting process, a question on the most important sources was posed. The respondents were asked to choose one to three most important sources of information one uses when making forecasts on future market returns. Seven options were offered but one could also write down a source outside the

list. As the survey did not technically limit the number of choices made, there was a number of respondents who exceeded the choice of three most important ones which was asked for. 49% chose 3 options, 9% chose one or two of the options, 12% exceeded the limit of three options and 30% did not answer the question at all. In the analysis, only those respondents who chose three options are included in order to make the analysis more straightforward[25]. The results from the analysis are summarized in Table 12 and will be referred to as the overall results in the subsequent paragraphs.

Table 12 The most important sources of information in returns expectations

The table shows the importance of certain information sources for investment advisors in making stock market return forecasts. The investment advisors are subcategorized by employer, gender and education (both in terms of educational background and FASD II) of an investment advisor. Each figure shows what percentage of the subgroup has included a certain source of information in the top three of the most important sources one uses when making return forecasts.

	Company ratios	Interest rates	Business magazines	Historical return	Material of employer	Ext. strategic reviews	Conversations with colleagues	Other
BY EMPLOYER:								
Bank A	35%	40%	54%	23%	90%	23%	34%	2%
Bank B	62%	31%	77%	15%	54%	46%	8%	8%
Bank C	28%	49%	51%	15%	99%	25%	31%	1%
Bank D	11%	46%	69%	26%	97%	17%	31%	3%
Bank E	18%	47%	53%	29%	100%	24%	29%	0%
Other	36%	45%	42%	21%	64%	52%	33%	6%
BY GENDER:								
Women	25%	42%	59%	23%	93%	21%	35%	2%
Men	43%	46%	47%	19%	81%	34%	26%	4%
BY EDUCATION:								
Compr. school	42%	46%	50%	17%	71%	29%	46%	0%
Vocational school	19%	44%	67%	18%	95%	21%	36%	1%
high school grad	38%	43%	52%	20%	93%	28%	23%	3%
University equiv.	33%	44%	49%	25%	88%	26%	33%	3%
University grad	35%	43%	54%	22%	86%	26%	31%	3%
BY APVY II:								
Not passed	25%	37%	62%	21%	89%	27%	36%	2%
Passed 2001-2006	39%	51%	40%	28%	88%	27%	24%	2%
All	32%	43%	55%	21%	89%	26%	32%	2%

[25] To find out whether excluding those who did not obey the limit of three options affects the results, two different versions of the initial analysis were carried out. The first analysis included all respondents who had chosen at least one option and the second one only took into account those who had chosen exactly three options. In both analyses the percentage of those who uses a certain source of information was very close to each other. As the results are very similar in both groups, the analysis is carried out by using the data of respondents who chose exactly three options in the list.

Clearly the most used source of information when making forecasts for future returns is the material provided by an investment advisor's own employer as 89% of investment advisors chose that among the three most important sources. The respondents were not asked to specify what kind of material they are provided, yet it is likely to mean strategic reviews, market recommendations and so on. Business magazines and the level of interest rates are also among the three most important sources of information that investment advisors use, with proportions of 55% and 43% respectively. Roughly a third say that conversations with colleagues would be in their list of the three most important sources and another third uses the company ratios in making return forecasts. 26% of investment advisors find strategic reviews published by someone else than one's own employer useful and think they are among the most important sources. Yet 21% also see the historical returns as an important factor in future return expectations. Outside the list proposed, the investment advisors list the following items among the sources of information: internet, electronic market information, the general state of the world, news, Reuters, Bloomberg, lectures organised by the employer, Morningstar, market risk premium, macroeconomic numbers, raw materials, exchange rates, stocks, hedging, TV, media, conversations with clients that have profit-making portfolios, chat (internet), own perceptions and risk/return -analysis.

Again, depending on certain demographic characteristics, the use of sources of information differs, although not crucially. The biggest differences can be found between banks although some differences were also found between genders as well as between educational classes. In Bank C, Bank D and Bank E close to 100% and 90% in Bank A includes the use of material provided by one's own employer in the list of the most important sources. In Bank B, only half of the investment advisors think so. This is probably due to the fact that in Bank B and other smaller banks, there is usually no investment analysis of their own but it has been outsourced. Furthermore, the investment advisors of Bank B more often chose business magazines or company ratios than own employer's material as one of the most important sources. Interestingly, Bank B investment advisors perceive the importance of other suggested sources differently as well. While only 8% of the investment advisors in Bank B included conversations with colleagues as important and as much as 62% thought that company ratios should be in the list of top three sources, roughly one third of investment advisors in other banks perceived one or both of these sources in the list of the most important.

Between genders and educational classes, the differences are not crucial and the overall list of top three sources is applicable to all subclasses. Yet it is interesting to notice that women use the material provided by the employer, conversations with colleagues as well as business magazines as a source for return forecasts more often than men. Men in turn use external strategic reviews and company ratios in their forecasting process more often than women do. As far as education is concerned, the results do not support the hypothesis that experts (in terms of higher education) would use historical return as a source of information less than those who have lower education. The finding is in line with Kaustia et al (2006). However, although the differences are not considerable it is interesting to note that those who have passed FASD II seem to use more number-based sources than those who have not passed the examination. Some differences can also be found between educational classes. Those who only have passed the comprehensive school use the material of own employer the least (71%) out of all educational classes but find conversations with colleagues more useful than others (46%). The vocational school graduates hardly use company ratios whereas they perceive business magazines more important a source of information compared to investment advisors with other educational background.

5.6. Views on the relation between firm characteristics and the expected return

This chapter presents the results from the third part of the survey in which investment advisors were asked to evaluate certain firm characteristics and their effect on the expected return on a stock. The chapter will provide evidence on which firm characteristics the Finnish investment advisors see as factors that affect their return expectation or required return on an asset. More importantly though, the results provide evidence on the effect of framing manipulation in judging the risk-return relations. To my best knowledge this study is the only one along with Glaser et al (2006) to document the framing effect in relation to stock market forecasts where the point of view of the question is highly significant.

Although the results are based on an experiment they have strong implications for practice as well. The results imply that depending on what a client asks and *how* he asks it, the advice one will receive can vary significantly. While the results of this experiment do not prove that investment advisors give inconsistent advice to their clients, the results do however strongly indicate that the advisors are perceptive of unconsciously doing so. In fact, the framing effect is so compelling in the experiment of this study that the analysis of results in this chapter will

only concentrate on the overall analysis of the responses which itself provides strong evidence on the effect of psychology in financial decision making. The further analysis by subgroups is excluded at this point, as it seems evident that the significance of the framing effect will remain high in all demographic groups and the potential difference between these groups is of less importance. Only the role of expertise is further examined in Chapter 5.6.3 as several recent studies have found that expertise decreases the effect of behavioural biases (e.g. Kaustia et al, 2006; Glaser et al, 2006). The main results from each framing setting are summarized in Table 13.

Table 13 The relationship between firm characteristics and the expected return in different framing settings

In Framing 1 the respondents were asked to answer yes or no to the questions. E.g. "In order to invest in a stock of a company that is more leveraged than average, I would require higher than average return."
In Framing 2 and Framing 3 the question is "How would the following firm characteristics affect your view on the future return for a stock?" In Framing 2 the proposition would be "A company has less debt than average" and in Framing 3 "A company has more debt than average". In both the two frames, there are three answering options: higher return, lower return and no effect.
The first paragraph in each answer box is the number of respondents who chose that answer. The second paragraph in each box represents the percentage of respondents who chose that answer.

framing 1	Yes		No		Total	
Poor liquidity-> higher return	150	**89 %**	18	11 %	168	100 %
Less analysts following -> "	88	**52 %**	80	48 %	168	100 %
Highly leveraged -> "	144	**86 %**	23	14 %	167	100 %
Poor growth prospects -> "	129	**78 %**	37	22 %	166	100 %

framing 2	Higher return		Lower return		No effect		Total	
Poor liquidity	11	7 %	116	**77 %**	24	16 %	151	100 %
More analysts following	45	30 %	17	11 %	90	**59 %**	152	100 %
Less leveraged	106	**70 %**	19	13 %	26	17 %	151	100 %
Poor growth prospects	3	2 %	140	**93 %**	8	5 %	151	100 %

framing 3	Higher return		Lower return		No effect		Total	
High liquidity	104	**64 %**	12	7 %	47	29 %	163	100 %
Less analysts following	30	18 %	36	22 %	97	**60 %**	163	100 %
Highly leveraged	20	13 %	106	**66 %**	34	21 %	160	100 %
Good growth prospects	152	**93 %**	3	2 %	8	5 %	163	100 %

framing 2+3 combined	Higher return		Lower return		No effect		Total	
Poor liquidity	23	7 %	220	**70 %**	71	23 %	314	100 %
Less analysts following	47	15 %	81	26 %	187	**59 %**	315	100 %
Highly leveraged	39	13 %	212	**68 %**	60	19 %	311	100 %
Poor growth prospects	6	2 %	292	**93 %**	16	5 %	314	100 %

5.6.1. The effect on return requirements (Framing 1)

The overall picture of the results in Framing 1 is that the views of investment advisors coincide well with the CAPM and the empirical evidence on realized returns presented in Chapter 3.1. That is, the results of this group suggest that the relations between firm characteristics and expected returns are in line with the relations that have been proven to exist in case of realized returns. As far as liquidity is concerned, the evidence in Framing 1 supports the earlier findings of e.g. Amihud and Mendelson (1986) and Pastor and Stambaugh (2001) in that the return requirement on an asset is negatively correlated with liquidity. That is, when a stock is highly liquid the required return on an asset is lower and vice versa. Although 11% of the respondents in the Framing 1 group do not require extra return for less liquid investments, it seems that investment advisors by and large accept the negative relationship between liquidity and required return on a stock. The same conclusion can be drawn in the relationships between leverage and required return as well as between a company's future growth prospects and required return. 86% of investment advisors require higher than average return on a company that is more leveraged than an average company. Correspondingly 78% agree with the earlier studies (see Helander, 2005) in that a company with worse than average future growth prospects will have to provide a premium in the return compared to otherwise similar companies in order to be an interesting investment. The analyst coverage of a company seems to divide the investment advisors. Roughly half of respondents in Framing 1 group agree and half disagree with the proposition that a company, which has fewer analysts following its business, is riskier and hence has to provide higher returns. Hence, the finding does not support the empirical evidence on the negative relation between the growth prospects of a company and realized returns.

5.6.2. The effect on expected returns (Framing 2 and Framing 3)

Although the results from Framing 1 itself do not seem to provide any interesting new information on expected stock returns, what makes the results obtained in the survey compelling is the difference of responses in Framing 1 compared to Framing 2 and Framing 3. Although several earlier studies in various fields have shown that psychological manipulation has an effect on decision-making (see chapter 4) there is no previous evidence on the manipulation as such used in this experiment. By simply changing the point of view from asking for the effect of a firm characteristic on return expectation instead of on required return

as in Framing 1, the conclusions drawn turn upside down. The only exception is the question on the analyst coverage, which is not considered to be that related to future returns on a stock and divides the professionals in all framing groups.

In Framing 2 and Framing 3 the conclusions on the results are similar with regards to all firm characteristics and hence they will be treated as one in the analysis. The positive or negative working of a characteristic did only have a significant effect in case of liquidity. In framing 2 77% infer that poor liquidity leads to lower returns and in framing 3 'only' 64% suggest that high liquidity leads to higher returns. With regards to liquidity, difference between the two is statistically significant ($z=2.52$, $p<0.05$) but as there is no difference in the opposite responses (Framing 2 higher returns vs Framing 3 lower returns) nor is there statistically significant differences in any other characteristics, the result can be treated as a chance result[26]. Hence, overall the positive or negative working of a characteristic does not affect the answers but in turn the change in the perspective of a question is highly significant. That is, when comparing the results in Framing 1 to those in the two latter ones the differences are statistically highly significant. Overall, the findings in Framing 2 and Framing 3 contradict with the CAPM and the empirical findings on realized stock returns with regards to liquidity, leverage and the growth prospects of a company. In turn, the evidence in this study supports the findings of e.g. Shefrin and Statman (1995) in that investors perceive the stocks of 'good companies' as good investments. The investment advisors in this experiment seem to form a negative association between risk and return and as a consequence end up expecting higher returns from less risky stocks.

[26] The differences between Framing 2 and Framing 3 were tested by the chi- square goodness-of-fit test to find out whether the two can be regarded as one group. E.g. the z-value for 'poor liquidity' is measured by comparing the answers poor liquidity->Yes (Framing 2) to high liquidity->No (Framing 3). Similarly z-value for 'high liquidity' is given by the difference between poor liquidity->No (Framing 2) and high liquidity->Yes (Framing 3). Statistical significance (sig.) is denoted in the following way: *** $p<0.001$; ** $p<0.01$; * $p<0.05$.

	z-value	p	sig.
Poor liquidity	-0.026	0.979	
More analysts following	1.872	0.062	
Less leveraged	1.051	0.294	
Poor outlook	0.095	0.925	
High liquidity	2.517	0.012	*
Less analysts following	-1.465	0.144	
Highly leveraged	0.016	0.988	
Great outlook	-0.186	0.853	

First, 70% of the respondents expect stocks that are less liquid than an average to have lower returns. The result is against the CAPM and the empirical evidence on realized stock returns of e.g. Amihud and Mendelson (1986). Moreover, the question on liquidity is the one in which Framing 1 group was the most unanimous about but to the opposite direction than in the two other framing groups. In the Framing 1, as much as 89% of the investment advisors state that they require higher return from a stock with poor liquidity. However, in Framing 2+3 only 7% agree with the proposition and instead 70% expect lower returns from less liquid companies compared to more liquid but otherwise similar companies.

With regards to leverage, a majority of the respondents expect lower returns on companies that are more leveraged than average (68%). Similarly, the return expectations are the higher the less leveraged a company is. Again this is against the CAPM and the empirical evidence of Bhandari (1988) and Fama and French (1992). Moreover, the results are the opposite of what was found in Framing 1 but support the behavioural asset pricing theories. Based on the results in the two latter framing groups investment advisors seem to think that 'good companies' are good investments in relation to the capital structure of the company as well. That is, they consider companies with low debt/equity –ratio as good companies and as an investment that will provide higher returns than more leveraged companies.

Similarly, investment advisors show a strong preference for stocks with great growth prospects in terms of analyst expectations. As much as 93% of the respondents see companies with better than average growth prospects as good investments which will provide better than average returns in future. Yet, 78% of the respondents in Framing 1 say that in order to invest in a company that has worse than average growth prospects, they require higher than average return on investment. The finding in the two latter framing groups is again against the evidence on realized stock returns.

Overall, this chapter shows that the implications of framing manipulation can be severe in the field of investment advising. With the exception of analyst coverage, the results are highly robust in indicating that the framing manipulation has a very strong effect on an investment advisor's judgements. Given that liquidity, leverage and growth prospects are all well-known firm characteristics with a certain effect on the risk of an investment, the effect of the manipulation is surprisingly strong. The fact that clients do ask same questions in varying

ways means that the effect of framing can be important in real-life investment advising situations as well. The results imply that situational factors can influence the advice that a client receives from a professional. In fact, this study shows that the advice on the effect of firm characteristics to equity returns that an investment advisor gives can vary significantly depending on the way one poses the question. However, it should also be kept in mind that earlier empirical evidence on behavioural biases shows that individuals independent of their characteristics or profession have been shown to suffer from the biases and hence it is no surprise to find that investment advisors are affected by the framing manipulation.

5.6.3. Expertise and framing effect

Several studies such as Glaser et al (2006) and Kaustia et al (2006) have shown that the effect of behavioural biases decreases with expertise. In this study education will be used as a proxy for expertise to test whether the expertise of an investment advisor changes the effect of framing. The group of those who have a university degree or a university equivalent degree is now considered as high expertise investment advisors. The results for the 'high expertise' subgroup are summarized in Table 14.

The results in this study imply that expertise does not reduce the effect of framing manipulation. When comparing the overall results to the results of the subgroup with high expertise in terms of education, no statistically significant differences were found[27]. It is however possible that financial education would be a better proxy for expertise than the level of education per se. Alternatively, work experience in the financial markets could act as a

[27] The differences between Framing 2 and Framing 3 were tested by the chi- square goodness-of-fit test to find out whether the two can be regarded as one group. E.g. the z-value for 'poor liquidity' is measured by comparing the answers poor liquidity->Yes (Framing 2) to high liquidity->No (Framing 3). Similarly z-value for 'high liquidity' is given by the difference between poor liquidity->No (Framing 2) and high liquidity->Yes (Framing 3). Statistical significance (sig.) is denoted in the following way: *** $p<0.001$; ** $p<0.01$; * $p<0.05$.

	z-value	p	sig.
Poor liquidity	0.1257	0.9001	
More analysts following	0.1123	0.9107	
Less leveraged	-0.4942	0.6218	
Poor outlook	-0.0723	0.9424	
High liquidity	1.4729	0.1418	
Less analysts following	-1.2947	0.1964	
Highly leveraged	0.4773	0.6335	
Great outlook	0.7280	0.4672	

better proxy for expertise than education. In this study, the responses on work experience rather imply to the experience in investment advising and hence they cannot be used as a good proxy for experience in the broader field of financial markets. Therefore the role of work experience in framing effect is not examined in this study and is left as an interest to further research.

Table 14 The relationship between firm characteristics and the expected return among the 'high expertise' subgroup

In this case high expertise is defined as those who have a degree in university or university equivalent.
In Framing 1 the respondents were asked to answer yes or no to the questions. E.g. "In order to invest in a stock of a company that is more leveraged than average, I would require higher than average return."
In Framing 2 and Framing 3 the question is "How would the following firm characteristics affect your view on the future return for a stock?" In Framing 2 the proposition would be "A company has less debt than average" and in Framing 3 "A company has more debt than average". In both the two frames, there are three answering options: higher return, lower return and no effect.
The first paragraph in each answer box is the number of respondents who chose that answer. The second paragraph in each box represents the percentage of respondents who chose that answer.

framing 1	Yes		No		Total	
Poor liquidity-> higher return	87	**92 %**	8	8 %	95	100 %
Less analysts following -> "	49	**51 %**	47	49 %	96	100 %
Highly leveraged -> "	82	**86 %**	13	14 %	95	100 %
Poor growth prospects -> "	75	**80 %**	19	20 %	94	100 %

framing 2	Higher return		Lower return		No effect		Total	
Poor liquidity	8	**9 %**	61	**70 %**	18	21 %	87	100 %
More analysts following	21	**24 %**	13	15 %	53	**61 %**	87	100 %
Less leveraged	55	**63 %**	13	15 %	19	22 %	87	100 %
Poor growth prospects	2	**2 %**	82	**94 %**	3	3 %	87	100 %

framing 3	Higher return		Lower return		No effect		Total	
High liquidity	48	**59 %**	7	9 %	26	32 %	81	100 %
Less analysts following	19	**23 %**	19	23 %	43	**53 %**	81	100 %
Highly leveraged	9	**11 %**	52	**66 %**	18	23 %	79	100 %
Good growth prospects	74	**91 %**	2	2 %	5	6 %	81	100 %

framing 2+3 combined	Higher return		Lower return		No effect		Total	
Poor liquidity	15	**9 %**	109	**65 %**	44	26 %	168	100 %
Less analysts following	32	**19 %**	40	24 %	96	**57 %**	168	100 %
Highly leveraged	22	**13 %**	107	**64 %**	37	22 %	166	100 %
Poor growth prospects	4	**2 %**	156	**93 %**	8	5 %	168	100 %

5.7. Shortcomings of the study

Although the results on the return expectations per se and in relation to firm characteristics seem robust there are a few drawbacks that might to some extent affect the results. However, I do not believe that the conclusions drawn would be any different regardless of the shortcomings given the large number of respondents.

First, it cannot be assured that no investment advisor has asked someone else's opinion and advice before answering the questions. Although the respondents were asked to answer the questions based on their own opinions there is a chance of cooperation, as the survey was not conducted as a controlled experiment but the respondents were able to participate to the survey online. As there is no data on the location of each investment advisor, one cannot test whether certain offices would have similar answers. Yet, it seems unlikely that it would be the case.

Second, in relation to return expectations it is likely that some respondents have misunderstood the question on long-term returns regardless of the instructions given in the survey. It seems apparent that those who provided three-digit return expectation estimates or those whose long-term expectations were considerably more optimistic than short-term expectations had provided the total expected return over the 20-year period instead of an annual expectation for the same period. As already discussed in 5.3, data cleaning was carried out in which the most obvious misunderstandings were deleted from the analysis. Despite the fact that the most obvious errors have been ignored, it is still possible that some error answers affect the results and hence the long-term return expectations would be somewhat upward biased. Yet, it has no effect on the analysis of false-consensus effect as the responses of those who have misunderstood the term 'annual long-term expected return' are most likely biased in all questions related to the long-term period. That is, both the long-term expectation of the respondent and his perceived long-term consensus forecast might be biased upwards but it does not affect the relative comparison between the two. Given that the primary motivation of this study is to find out whether any advisor or firm characteristic can explain the return expectations of the Finnish investment advisors, the potential problem with certain long-term expectations does not affect the results of this study.

6. SUMMARY AND CONCLUSIONS

In this paper I have studied the effect of advisor characteristics on investment advisors' market return forecasts for European markets and the emerging markets. In addition, an empirical experiment was carried out to examine whether framing manipulation affects ones' views on the relations between firm characteristics and stock returns. The empirical research was performed as an online-based questionnaire among Finnish investment advisors who have passed the FASD General Securities Examination. In total 742 advisors participated in the survey, which is 68% of those who received the email regarding the study. The group of respondents represents well the characteristics of all investment advisors and hence the results of this study can be generalized to concern all advisors. Overall, I find that Finnish investment advisors are affected by advisor and stock characteristics as well as framing manipulation when making return forecasts. I find that certain characteristics of an advisor explain one's return forecasts statistically significantly. This suggests that a client asking for investment advice might get varying advice depending on how and to whom one poses the question. I also find that investment advisors on average perceive to be more optimistic on the future market returns than they really are. That is, an average investment advisor expects others to have higher expectations on the future market returns than they really do.

Overall, the professional consensus on market returns on both European markets and the emerging markets suggest that Finnish investment advisors expect the markets to generate lower annual returns in the short-term than in the long-term. Moreover, the average expectations for the emerging markets are significantly higher than for European markets both in short-term and in long-term and even after controlling for the most overoptimistic expectations ($p<0.001$). On average, the Finnish investment advisors expect European stock markets to return 5.7% over the next 12 months and 10.1% p.a. over the next 20 years. For the emerging markets the average expectations are 11.6% and 15.4% respectively. The perceived professional consensus for the European markets is statistically significantly higher than the real professional consensus in both time horizons ($p<0.001$). In other words, the professionals on average suffer from false-consensus effect. However, the return expectations depend on the characteristics of an advisor and hence among certain subgroups the average return expectations as well as the effect size of the bias can differ substantially. In particular, the gender effect was found to be statistically highly significant ($p<0.001$) as the average long-

term return expectation for European markets was significantly higher among women compared to men. Also, one's perceived ability to forecast was a significant factor in explaining the return forecasts in case where an advisor perceives to be worse than average forecaster ($p<0.05$). Interestingly though, women turn out to be considerably less confident on their ability to forecast than men. In fact, the gender effect explains the perceived ability to forecast statistically significantly ($p<0.001$) along with FASD II degree ($p<0.05$) and with one of the employer dummies ($p<0.01$) of which the latter two have a positive effect on one's perceived ability to forecast.

Along with the study of Glaser et al (2006) this study is to my best knowledge the only one to document the framing effect in relation to stock market forecasts. To carry out the experiment, the respondents were randomly divided into three homogenous groups which all responded to only one set of questions in relation to firm characteristics and their effect on return expectations and return requirements. The question sets all asked a respondent to evaluate how a specific firm characteristic would affect one's required return or return expectation compared to an otherwise similar company. Framing 1 asked whether a respondent would require higher return from a company that is for example less liquid than average. In relation to liquidity, the other two framings asked whether the expected return for a stock is higher or lower for a company of which the liquidity is worse than average (Framing 2)/ better than average (Framing 3) or if the liquidity has any effect on the expectation at all. That is, the latter two framings only differ in the wording of the characteristic, which eventually was found to have no significant effect on the results. However, the difference in the answers is compelling between Framing 1 and Framing 2+3. The results suggest that depending on how the question is framed – whether the question is related to required return or expected return – the relation between firm characteristics and stock return is seen differently. While in Framing 1 the investment advisors state that they require higher return from less liquid stocks (89%), in Framing 2+3 the conclusion is the opposite as the advisors expect lower returns from less liquid stocks (70%). The same conclusion can be drawn with regards to the leverage and growth prospects of a company. The level of analyst coverage, which was also included in the experiment, was the only characteristic to divide the advisors in all framing settings. To test whether expertise decreases the effect of biases as shown in the empirical studies of Glaser et al (2006) and Kaustia et al (2006), a sub-analysis for experts was also carried out. By using education as a

proxy for the level of expertise, one cannot find evidence on expertise decreasing the effect of framing manipulation among Finnish investment advisors. Consistent with the empirical evidence of La Porta et al (1997) and Shefrin (2001), investment advisors seem to perceive good companies as good investments that also provide better returns. However, the result is dependent on the framing of the question, which suggests that the professionals are in fact highly sensitive to psychological manipulation.

While the results of this study do not prove that investment advisors give inconsistent advice to their clients, the results do however strongly indicate that the advisors are perceptive of unconsciously doing so. First, the empirical evidence of this study shows that expected stock market returns vary depending on the advisor's characteristics. Second, the advice on the effect of firm characteristics on stock returns might differ depending on how a question is framed. Hence, a noteworthy implication of the experiment is that the situational factors can indeed affect a real-life investment advising as well.

REFERENCES

Abel, A., 1999. Risk Premia and Term Premia in General Equilibrium. *Journal of Monetary Economics*, Vol.4, Number 1, 3-33.

Amihud, Y., 2002. Illiquidity and Stock Returns: Cross-section and Time-Series Effects. *Journal of Financial Markets*, No.5, 31-56.

Amihud Y., Mendelson, H., 1986. Asset Pricing and the Bid-Ask Spread. *Journal of Financial Economics,* Volume 17, Issue, 2, 223-249.

Banz, R., 1981. The Relationship Between Return and the Market Value of Common Stocks. *Journal of Financial Economics*, Vol.9, Issue 1, 3-18.

Barber B., Odean, T., 2001. Boys Will Be Boys: Gender, Overconfidence and Common Stock Investment. *Quarterly Journal of Economics*, Feb 2001, 261-290.

Bhandari, L., 1988. Debt/Equity Ratio and Expected Common Stock Returns: Empirical Evidence. *Journal of Finance*, Vol.43, No.2, 507-528.

Bloomfield, R., Michaely, R., 2004. Risk Or Mispricing? From the Mouths of Professionals. *Financial Management*, Vol. 33, 61-81.

Brav, A., Lehavy, R., Michaely, R., 2005. Using Expectations to Test Asset Pricing Models. *Financial Management*, Vol. 34, 31-64.

Brennan, M., Jegadeesh, N., Swaminathan, B., 1993. Investment Analysis and the Adjustment of Stock Prices to Common Information. *Review of Financial Studies*, Vol.6, No.4, 799-824.

Brennan, M., Subrahmanyam, A., 1995. Market Microstructure and Asset Pricing: On the Compensation for Illiquidity in Stock Returns. *Journal of Financial Economics*, Vol.41, 441-464.

Campbell, J., Thompson, S., 2005. Predicting the Equity Premium Out of Sample: Can Anything Beat the Historical Average. Working Paper, Harvard University.

Chan K. C. Chen N-F, 1991. Structural and Return Characteristics of Small and Large Firms. Journal of Finance, Vol. 46, No. 4, 1467-1484.

Chapman, G., Johnson, E., 1999. Anchoring, Activation, and the Construction of Values. Organizational Behavior and Human Decision Processes, Vol. 79, No. 2, p. 115–153.

Deaves, R., Lueders, E., Schröder, M., 2005. The Dynamics of Overconfidence: Evidence from Stock Market Forecasters. ZEW Discussion Paper No. 05-83.

Dimson E., March P., Staunton M., 2003. Global Evidence on the Equity Premium. *Journal of Applied Corporate Finance*, Vol. 15, No. 4,

Fama, E., 1970, Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance*, No.25, 383-417.

Fama, E., 1998. Market Efficiency, Long-term Returns, and Behavioral Finance. *Journal of Financial Economics* 49, 283-306.

Fama, E., French K., 1992. The Cross-Section of Expected Stock Returns. *Journal of Finance*, Vol. 47, No.2, 427-465.

Fama E., French K., 2002. The Equity Premium. *Journal of Finance*, Vol.57, No.2, p.637-659.

Glaser, M., Langer, T., Reynders, J., Weber M., 2006. Framing Effects in Stock Market Forecasts: the Difference Between Asking for Prices and Asking for Returns. A working paper to be presented at 2007 AFA meeting.

Goyal, A., Welch, I., 2006. A Comprehensive Look at the Empirical Performance of Equity Premium Prediction. Yale ICF working paper No. 04-11.

Haigh, M., List, J., 2005. Do Professional Traders Exhibit Myopic Loss Aversion? An Experimental Analysis. *Journal of Finance*, Vol. 60, No.1, 523-534.

Helander K., 2005. Properties of Analysts' Estimates and Their Effect on Future Stock Returns. Master's Thesis, Helsinki School of Economics.

Kaustia M., Alho, E., Puttonen, V., 2006. How much does expertise reduce behavioral biases? The case of anchoring effects in stock market estimates. Unpublished working paper, Helsinki School of Economics.

Korniotis, G., Kumar, A., 2006. Does Investment Skill Decline due to Cognitive Aging or Improve with Experience? Unpublished paper, University of Notre Dame.

Kuhberger A., 1998. The Influence of Framing on Risky Decisions: a Meta-Analysis. *Organizational Behaviour and Human Decision Processes*, Vol.75, No.1, 23-55.

La Porta, R., Lakonishok, J., Shleifer, A., Vishny, R., 1997. Good news for value stocks: further evidence on market efficiency. *Journal of Finance,* Vol 52, No.2, 859-874.

Levin, I., Schneider, S, Gaeth, G., 1998. All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects. *Organizational Behaviour and Human Decision Processes*, Vol.76, No.2, 149-188.

Lewellen, W., Lease, R., Schlarbaum, G., 1977. Patterns of Investment Strategy and Behavior among Individual Investors. *Journal of Business*, 296-333.

Mehra, R., 2003. The Equity Premium: Why Is It a Puzzle. NBER Working Paper 9512.

Merton, R., 1987. A Simple Model of Capital Market Equilibrium with Incomplete Information. *Journal of Finance*, Vol.42, Issue 3, 483-510.

Montier, J., 2006, Global Equity Strategy, Dresdner Kleinwort Wasserstein, February 2006.

Mussweiler, T., Strack, F., 1999. Hypothesis-Consistent Testing and Semantic Priming in the Anchoring Paradigm: A Selective Accessibility Model. *Journal of Experimental Social Psychology*, Vol. 35, Issue 2, 136–164.

Odean, T., 1998. Volume, Volatility, Price, and Profit When All Traders Are Above Average. *Journal of Finance*, Vol. 53, Issue 6, 1887-1934.

Pastor, L., Stambaugh, R., 2001. Liquidity Risk and Expected Stock Returns. NBER Working paper 8462.

Schwert G., 2002. Anomalies and Market Efficiency. NBER Working paper, No. W9277.

Shefrin, H., 2001. Do Investors Expect Higher Returns from Safer Stocks than from Riskier Stocks? *Journal of Psychology and Financial Markets*, Vol. 2, Issue 4, 176-181.

Shefrin, H., Statman, M., 1994. Behavioral Capital Asset Pricing Theory. *Journal of Financial and Quantitative Analysis*, Vol.29, 323-349

Shefrin, H., Statman, S., 1995. Making Sense of Beta, Size, and Book-to-Market. *Journal of Portfolio Management*, 21, No. 2, 26-34.

Thaler R., 2000. From Homo Economicus to Homo Sapiens. *The Journal of Economic Perspectives*, Vol.14, No.1, 133-141.

Tversky, A., Kahneman, D., 1974. Judgment under uncertainty: heuristics and biases. *Science* 185, 1124-1131.

Tversky, A., Kahneman, D., 1986. Rational Choice of the Framing Decisions, *The Journal of Business*, Vol.59, No.4 Part 2, 251-278.

Welch I., 2000. Views of Financial Economists on the Equity Premium and on Professional Controversies. *The Journal of Business*, 73(2), 501-537.

Welch I., 2001. The Equity Premium Consensus Forecast Revisited. Cowles Foundation Discussion Paper No. 1325.

APPENDIX 1 Requirements for the investment advisors in Finland

Legislation now and in the future

Today, Act on Investment Services only requires the management of the investment services companies to be suitable and have professional skills to be eligible for getting an operating licence while employees working for these companies do not have to be authorized or have any specific education (excluding stock- and derivatives brokers)[28]. However, the legislation is about to change and individual investment advisors will be required to have an authorization as well. The European Union's new Directive on Markets in Financial Instruments (MiFID) will apply from 2007 and it includes a wide variety of developments for the industry such as including investment advice within the scope of EU regulation. The specific changes in the Finnish legislation are yet to be decided.

FASD examinations

The Finnish Association of Securities Dealers (FASD) is the co-operation and self-regulatory organisation of the Finnish investment services industry. It maintains and develops a system for investment services degree, which consists of two examinations: FASD General Securities Examination and FASD Investment Advisor Examination. Both examinations have been part of the self-regulation of FASD since 2001 and over 3000 people have passed the first level exam since. The objective of the system is to improve the financial skills and knowledge of the people who work in the industry as well as to enhance the image of the industry. However, as the law does not yet require authorization for investment advisors, they are not required to pass the FASD examinations either and so taking the examinations is entirely voluntary. In order to take the FASD examinations, no education or prior work experience in the industry is required and no class participation is obligatory either. Thus to get both degrees, one only needs to pass the two examinations.

[28] FINLEX

APPENDIX 2A The questionnaire in Finnish

The survey was carried out in Finnish. Hence, the original version of the questionnaire is provided here. See Appendix 1b for the English translation.

Yleisohjeet vastaamiseen

Kyselyyn vastaaminen kestää noin 5 minuuttia. Voit siirtyä kysymyksestä toiseen klikkaamalla *edellinen/seuraava.* Kun olet vastannut kaikkiin kysymyksiin ja lähettänyt kysymyksesi klikkaamalla *valmis,* et voi enää palata muuttamaan vastauksiasi. On tärkeää, että vastaat omien mielipiteidesi mukaan, sillä oikeita vastauksia kysymyksiin ei ole. Kiitos osallistumisestasi!

I: TAUSTATIEDOT

Demografiset tekijät

Sukupuoli

- ❑ Nainen
- ❑ Mies

Ikä

____ vuotta

Koulutus

Koulutustausta (korkein suoritettu tutkinto)

- ❑ Peruskoulu
- ❑ Ylioppilas
- ❑ Ammattikoulu
- ❑ Ammattikorkeakoulu
- ❑ Yliopisto / Korkeakoulu

Sijoitusneuvojan tutkinto

Olen suorittanut APVY:n sijoituspalvelututkinnon (APVY I) vuonna

- ❑ 2001
- ❑ 2002
- ❑ 2003
- ❑ 2004
- ❑ 2005
- ❑ 2006
- ❑ En ole suorittanut

Olen suorittanut APVY:n sijoitusneuvojan erikoistutkinnon (APVY II) vuonna

- ❑ 2001
- ❑ 2002
- ❑ 2003
- ❑ 2004
- ❑ 2005
- ❑ 2006
- ❑ En ole suorittanut

APVY:n tentteihin valmentavat kurssit, joille olen osallistunut (järjestäjä ja vuosi)

[avoin vastaus]

Työnantaja ja kokemus

Yritys, jossa toimin sijoitusneuvojana

- ❑ Nordea
- ❑ Sampo
- ❑ OP-ryhmä (+Pohjola)
- ❑ Säästöpankkiryhmä
- ❑ Aktia
- ❑ Muu, mikä? [avoin vastaus]

Olen toiminut sijoitusneuvojana

_____vuotta

Titteli/nimike, jos ei sijoitusneuvoja

[avoin vastaus]

Asiakaskontaktit

Henkilökohtaisten asiakkaideni lukumäärä

- ❑ 0-100
- ❑ 100-200
- ❑ 200-300
- ❑ 300-400
- ❑ yli 400

Vuotuisten sijoituskeskustelujen lukumäärä asiakkaiden kanssa

- ❑ alle 100
- ❑ 100-300
- ❑ 300-500
- ❑ 500-700
- ❑ 700-900
- ❑ yli 900

Yhden sijoituskeskustelun kesto keskimäärin

_____minuuttia

II: OSAKEMARKKINOIDEN TUOTTO-ODOTUKSET

Euroopan osakemarkkinoiden tuotto-odotukset

Asiakas kysyy mielipidettäsi keskimääräisestä tuotosta Euroopan osakemarkkinoilla tulevaisuudessa. Oletetaan tässä, että asiakkaan kysymys koskee ns. vanhoja EU-maita (Alankomaat, Belgia, Englanti, Espanja, Irlanti, Italia, Itävalta, Kreikka, Luxemburg, Portugali, Ranska, Ruotsi, Saksa, Suomi ja Tanska), eli rajataan tässä pois Itä-Euroopan kehittyvät markkinat.

Anna arviosi seuraaviin kysymyksiin ilman vaihteluvälejä.

Minkä arvion annat tulevasta vuotuisesta tuotosta asiakkaallesi, kun hänen sijoitushorisonttinsa on

lyhyellä aikavälillä (1 vuosi), % p.a. _____
pitkällä aikavälillä (20 vuotta) % p.a. _____

Miten arvioisit <u>muiden sijoitusneuvojien</u> keskimäärin neuvovan asiakastasi Euroopan osakemarkkinoiden tulevan vuotuisen tuoton suhteen?

lyhyellä aikavälillä (1 vuosi), % p.a. _____
pitkällä aikavälillä (20 vuotta) % p.a. _____

Kehittyvien osakemarkkinoiden tuotto-odotukset

Seuraavaksi asiakas kysyy mielipidettäsi kehittyvistä markkinoista (Kiina, Intia, Venäjä, Itä-Eurooppa, Etelä-Amerikka jne). Mikä on keskimääräinen vuotuinen tuotto-odotuksesi näiden alueiden osakemarkkinoille?

lyhyellä aikavälillä (1 vuosi), % p.a. _____
pitkällä aikavälillä (20 vuotta) % p.a. _____

Lähteet tuotto-odotuksille

Mitä lähteitä käytät määrittäessäsi osakemarkkinoiden tuotto-odotusta? Valitse 1-3 tärkeintä annetuista vaihtoehdoista.

- ❑ Yritysten tunnusluvut
- ❑ Korkotaso
- ❑ Talouslehdet
- ❑ Historiallinen tuotto
- ❑ Oman työnantajan materiaali (strategiakatsaukset ym.)
- ❑ Ulkopuoliset strategiakatsaukset ym.
- ❑ Keskustelut kollegoiden kanssa
- ❑ Muu, mikä? [avoin vastaus]

Oma ennustuskyky

Mikä on käsityksesi omasta kyvystäsi ennustaa tulevaa osakemarkkinoiden tuottoa muihin sijoitusneuvojiin verrattuna?

- ❑ Keskimääräistä parempi
- ❑ Keskimääräistä huonompi
- ❑ Ei parempi eikä huonompi

III: YRITYKSEN OMINAISUUKSIEN VAIKUTUS TUOTTO-ODOTUKSEEN

Yleisohje: Ajattele yritystä, joka on kaikessa suhteessa keskimääräinen paitsi kysytyssä asiassa. Jos ajattelet ensin, että "riippuu tilanteesta" niin muista, että tilanteen oletetaan muilta osin olevan keskimääräinen/normaali.

FRAMING 1 [tämä otsikko ei ollut näkyvissä vastaajille]

Jotta suostuisin sijoittamaan keskimääräistä huonomman likviditeetin osakkeeseen, vaatisin siltä keskimääräistä parempaa tuottoa.

- ❑ Kyllä
- ❑ Ei

Jotta suostuisin sijoittamaan osakkeeseen jota seuraa keskimääräistä vähemmän analyytikoita, vaatisin siltä keskimääräistä parempaa tuottoa.

- ❑ Kyllä
- ❑ Ei

Jotta suostuisin sijoittamaan keskimääräistä velkaisemman yrityksen osakkeeseen, vaatisin siltä keskimääräistä parempaa tuottoa.

- ❑ Kyllä
- ❑ Ei

Jotta suostuisin sijoittamaan keskimääräistä huonommat kasvunäkymät (analyytikoiden tuloskasvuodotukset viiden vuoden tähtäimellä, konsensusennusteen mukaan) omaavan yrityksen osakkeeseen, vaatisin siltä keskimääräistä parempaa tuottoa.

- ❑ Kyllä
- ❑ Ei

FRAMING 2 [tämä otsikko ei ollut näkyvissä vastaajille]

Miten seuraavat yrityksen ominaisuudet vaikuttavat omaan näkemykseesi osakkeen tulevasta tuotosta (arvonnousu+osingot)?

Keskimääräistä huonompi likviditeetti

- ❑ Korkeampi tuotto
- ❑ Alhaisempi tuotto
- ❑ Ei vaikutusta

Yritystä seuraa keskimääräistä enemmän analyytikoita

- ❑ Korkeampi tuotto
- ❑ Alhaisempi tuotto
- ❑ Ei vaikutusta

Yrityksellä keskimääräistä vähemmän velkaa

- ❑ Korkeampi tuotto
- ❑ Alhaisempi tuotto
- ❑ Ei vaikutusta

Keskimääräistä huonommat kasvunäkymät (analyytikoiden tuloskasvuodotukset viiden vuoden tähtäimellä, konsensusennusteen mukaan)

- ❑ Korkeampi tuotto
- ❑ Alhaisempi tuotto
- ❑ Ei vaikutusta

IV: MUUTA

Oletko osallistunut aiemmin kyselytutkimukseen, joka liittyy osakemarkkinoiden tuotto-odotuksiin?

- ❑ Kyllä
- ❑ En
- ❑ En muista

Mikäli haluat osallistua Miten sijoitan rahastoihin -kirjan arvontaan ja/tai saada yhteenvedon tuloksista ennen niiden virallista julkistamista, kirjoita sähköpostiosoitteesi yhteen seuraavista:

Arvonta ja yhteenveto _____
Vain arvonta _____
Vain yhteenveto _____

Voit nyt lähettää vastauksesi klikkaamalla valmis.
Kiitos osallistumisestasi!

APPENDIX 2B The questionnaire in English (translated)

The survey was carried out in Finnish. The original version of the questionnaire in Finnish can be found in Appendix 1a.

General instructions for responding to the survey

Participating in the survey takes approximately 5 minutes. You can move from one question to another by clicking *next/previous*. Once you have responded to all questions and sent your answers by clicking *ready*, you cannot return to the survey and change your answers. It is important that you base your responses on your own opinions as there are no right answers to the questions. Thank you for your participation!

I: BACKGROUND INFORMATION

Demographic factors

Gender

- ❑ Female
- ❑ Male

Age

____ years

Education

Educational background (the highest degree passed)

- ❑ Comprehensive school
- ❑ Vocational School
- ❑ High School graduate
- ❑ University equivalent
- ❑ University

FASD examinations

I have passed the first-level FASD examination in

- ❑ 2001
- ❑ 2002
- ❑ 2003
- ❑ 2004
- ❑ 2005
- ❑ 2006
- ❑ I have not passed FASD I

I have passed the second-level FASD examination in

- ❑ 2001
- ❑ 2002
- ❑ 2003
- ❑ 2004
- ❑ 2005
- ❑ 2006
- ❑ I have not passed FASD II

The preparatory courses for the FASD examinations that I have participated in (who organised and course and the year of participation) [Open response]

Employer and experience

The company I work for as an investment advisor

- ❑ Nordea
- ❑ Sampo
- ❑ OP-Group (+Pohjola)
- ❑ Säästöpankki-Group
- ❑ Aktia
- ❑ Other, (please specify) [open response]

I have worked as an investment advisor for

_____ years

Title or organisational position, if not investment advisor

[Open response]

Contacts with clients

The number of my personal clients

- ❑ 0-100
- ❑ 100-200
- ❑ 200-300
- ❑ 300-400
- ❑ over 400

The number of investment discussions with clients per year

- ❑ under 100
- ❑ 100-300
- ❑ 300-500
- ❑ 500-700
- ❑ 700-900
- ❑ over 900

The average duration of an investment discussion with a client

_____ minutes

II: EXPECTED RETURNS ON STOCK MARKETS

Return expectations for the European stock markets

A client asks for your opinion on the average future return for the European stock markets. Assume, that the questions concern so called 'old' EU-countries (Netherlands, Belgium, England, Spain, Ireland, Italy Austria, Greece, Luxembourg, Portugal, France, Sweden, Germany, Finland and Denmark); that is the emerging Eastern European markets are now excluded.

Please, give your estimates without confidence intervals.

What estimate on the annual future return do you give for a client who's investment horizon is

In the short-term (1 year), % p.a. _____
In the long-term (20 years) % p.a. _____

How would you estimate <u>other investment advisors</u> on average to advice your client on the annual future return for the European markets?

In the short-term (1 year), % p.a. _____
In the long-term (20 years) % p.a. _____

Return expectations for the Emerging stock markets

Next, your client asks for your opinion on the Emerging markets (China, India, Russia, Eastern Europe, South America etc). What is your average annual return expectation for these markets

In the short-term (1 year), % p.a. _____
In the long-term (20 years) % p.a. _____

Sources for return expectations

What sources of information do you use in making return expectations for stock markets? Please choose 1-3 most important ones from the list.

- ❑ Company ratios
- ❑ Interest rates
- ❑ Business magazines
- ❑ Historical return
- ❑ Material of own employer
- ❑ External strategic reviews etc
- ❑ Conversations with colleagues
- ❑ Other (please specify) [open response]

Own ability to forecast

What is your perception of your own ability to forecast future returns of stock markets compared to other investment advisors

- ❑ Better than average
- ❑ Worse than average
- ❑ Not better, not worse

III: THE EFFECT OF FIRM CHARACTERISTICS TO RETURN EXPECTATIONS

General instruction: Think of a company, that is average in all terms expect in the one that is being asked. If your first thought is that 'it depends on the situation' remember that the situation is assumed to be average/normal in all other terms.

FRAMING 1 [This header hidden from respondents]

In order to invest in a stock of a company that is less liquid than average, I would require higher than average return.

- ❑ Yes
- ❑ No

In order to invest in a stock of a company that is being followed by fewer analysts than average, I would require higher than average return.

- ❑ Yes
- ❑ No

In order to invest in a stock of a company that is more leveraged than average, I would require higher than average return.

- ❑ Yes
- ❑ No

In order to invest in a stock of a company that has worse than average future growth prospects (according to the consensus of analysts on 5-year earnings growth expectations) I would require higher than average return.

- ❑ Yes
- ❑ No

FRAMING 2 [This header hidden from respondents]

How would the following firm characteristics affect your view on the expected future return for a stock [capital gains+dividend)?

Liquidity is worse than average

- ❑ Higher return
- ❑ Lower return
- ❑ No effect

A smaller than average number of analysts follow the company

- ❑ Higher return
- ❑ Lower return
- ❑ No effect

A company has less debt than average

- ❑ Higher return
- ❑ Lower return
- ❑ No effect

The company that has worse than average future growth prospects (according to the consensus of analysts on 5-year earnings growth expectations)

- ❑ Higher return
- ❑ Lower return
- ❑ No effect

IV: OTHER

Have you previously participated in a survey that is related to return expectations for stock markets?

- ❑ Yes
- ❑ No
- ❑ I cannot remember

In case you would like to participate in the lottery to win the book 'Miten sijoitan rahastoihin' and/or receive a summary on the results before they are being published, please write down your e-mail address in one of the following:

Lottery and summary _____
Only the lottery _____
Only the summary _____

You can now send your answers by clicking *ready*.
Thank you for your participation!